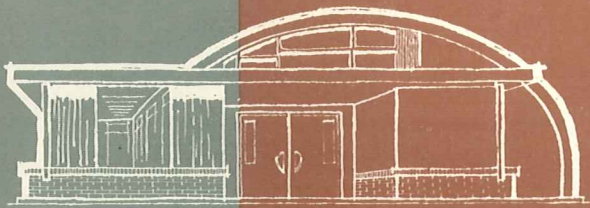




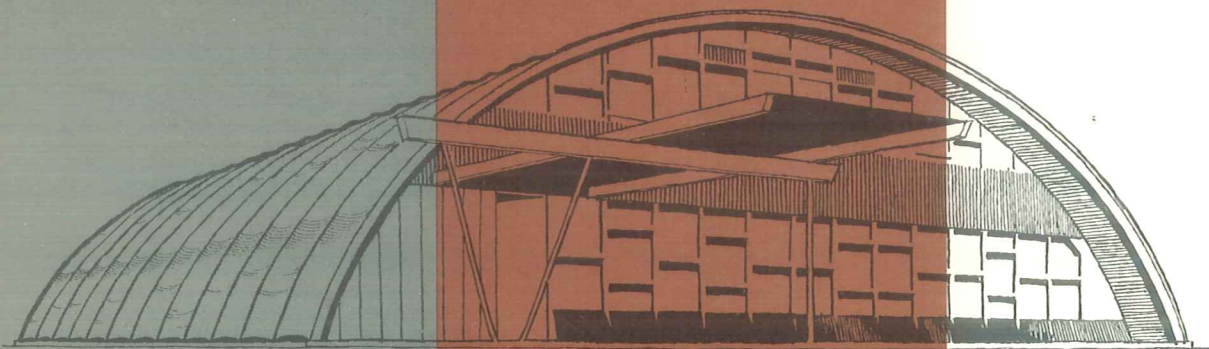
ASSEMBLY AND SPECIFICATION MANUAL







**NEW IDEAS IN LOW-COST BUILDINGS**



**Wonder  
Building®  
Structures**

INDUSTRY  
TRANSPORTATION  
RECREATION  
BUSINESS  
AGRICULTURE  
INSTITUTIONS





# plan BIG!

you can afford to  
when you build

the **WONDER BUILDING® WAY!**

Give your planning free reign — build the way you want and still stay within your budget! With Wonder Building, there's no high price tag to limit the versatility of your design, no need to compromise on space, strength or functional beauty.

The reason is Wonder Building pre-engineered, *unitized* design which utilizes double-corrugated steel panels to form a self-supporting structure. This versatile new building technique eliminates costly excavation, extensive foundations . . . panels form roof, ceiling and sides. Cuts building costs, erection time 50%!

Highest structural strength is achieved and code requirements met without posts, pillars, trusses — without a framework of any kind. Floor area is completely unobstructed. All-steel construction means durability, long life — with less maintenance. Fire-resistant!

You can build to practically any design with Wonder Building standard structures — in a wide range of widths, any length. As a structural component, Wonder Building panels are compatible with new or existing architecture.



everywhere you go . . .

**WONDER BUILDING®** sets the pace in modern, low-cost construction

Smart, modern interpretations or standard work-a-day structures — Wonder Building design is *completely functional and versatile* for every use. Here are just a few of the many Wonder Building applications.

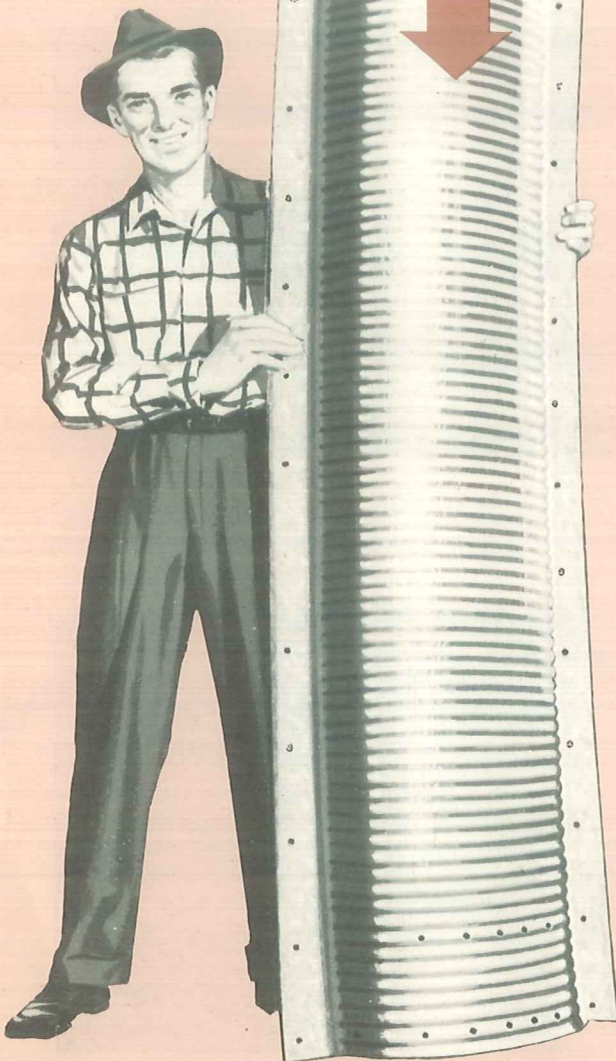
- churches • warehouses • manufacturing plants • aircraft hangars • offices • exhibit halls
- gymnasiums • auto washes • clubs • drive-ins • farm buildings • supermarkets



# slash building costs, construction time *right down the middle!*

## DOUBLE CORRUGATION!

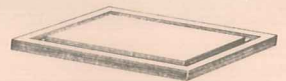
Each Wonder Building panel is Coro-Crimped in a series of small corrugations. Assembled panels form 2-foot corrugations. The combination results in the amazing DOUBLE CORRUGATION design — strongest in the building industry!



You can put up a Wonder Building structure and start using it in just half the time it takes to construct other buildings! And you can figure on saving 50% in labor and construction costs in the bargain! The reason? Simple, uncomplicated building plans. You can even do it yourself! Patented Wonder Building panels are heavy-gauge, zinc-coated steel — double-curved and corrugated to form rigid, self-supporting arches. Bolted construction assures fast, low-cost erection. No costly framework... no posts, pillars, braces or trusses. The only foundation needed is a concrete slab. The Wonder Building system makes conventional construction obsolete — you pocket the difference in time and labor savings!

### 1. START WITH A SLAB

Low cost foundation... simple "floating" concrete slab with channel for sides of the structure.



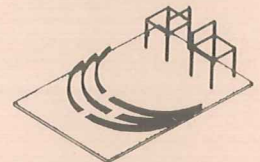
### 2. FAST ASSEMBLY

Precision-made panels bolt together quickly to form self-supporting arches. Caulking assures a weather-tight seal.



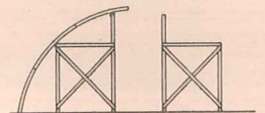
### 3. SIMPLE SCAFFOLDING

A rough support to hold half-arches in position speeds erection.



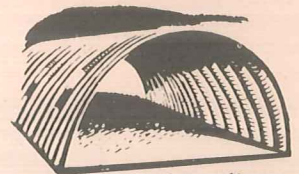
### 4. ARCH CONSTRUCTION

Half-arches are set on scaffolding, lapped and bolted together to complete the full arch.



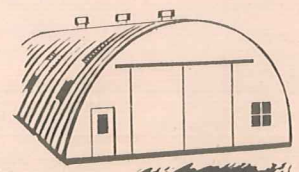
### 5. BUILDING IS COMPLETED

Arches are progressively joined together until structure is completed. Arch bases are sealed with concrete in foundation channel.



### 6. ACCESSORIES

All-steel end walls are available in a wide variety of designs. Choice of doors and windows—ventilators. Translucent fiberglass panels in stock for natural lighting. Easily insulated.



### SYMBOL OF SIMPLICITY

No other type of structure can be erected so simply and economically. Arch panels assemble with one size bolt. Only fastener required! Weather sealed with neoprene washers. 50% of construction labor is done on the ground—saves time, cuts cost.





# 3

## BASIC DESIGNS . . . . you can



### STRAIGHT WALL

Popular "U" design — available in many different types. 100% usable wall area. Highly adaptable to component styling — ideal for churches, clubs, stores, offices, warehouses.

Type	Outside width	Center height
1600 GR	17'	10'
2100 GR	20'	11'-8"
2300 GR	26'	12'
3100 GR	33'	15'
3800 GR	35'	16'
4100 GR	41'	17'
5100 GR	48'	19'
5700 GR	56'	20'
6100 GR	62'	22'



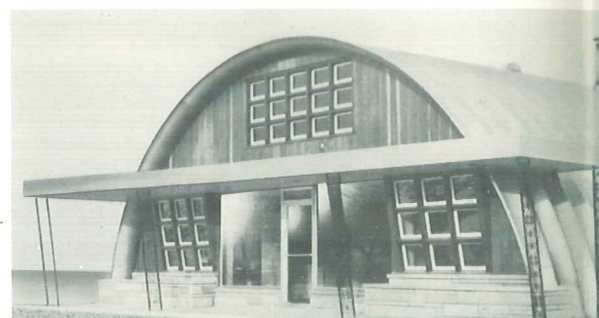
An architect's imagination and a 32- x 70-foot Wonder Building structure resulted in this modern church at Denver, Colorado.



### SEMI-CIRCULAR WALL

Provides maximum utility and economy. Many types available. 100% unobstructed floor space. Can be ordered in sizes up to 64 feet wide — in any length. Easy to expand. Low maintenance.

Type	Outside width	Center height
300 GR	30'	14'
400 GR	40'	17'
600 GR	62'	21'
3500 GR	35'	15'
4400 GR	41'	20'-4"
5200 GR	51'	18'
6300 GR	64'	23'
7100 GR	70'	24'



This 40-foot wide Wonder Building with semi-circular wall design is used for a sales office and warehouse at Fort Wayne, Indiana.



### "TRUSS-SKIN" ROOF SYSTEM

Most practical, lowest cost way to cover or enclose vast areas . . . aircraft hangars, sports arenas, super-markets. Heavy-gauge arch steel panels form self-supporting roof without posts, braces, or trusses of any kind . . . provide strength, stability. Fire-resistant. Easily, quickly erected. Roofing is not required — structure and roof are one! "Truss-Skin" Roof Systems are available in widths from 20 to 300 feet. Unlimited lengths.



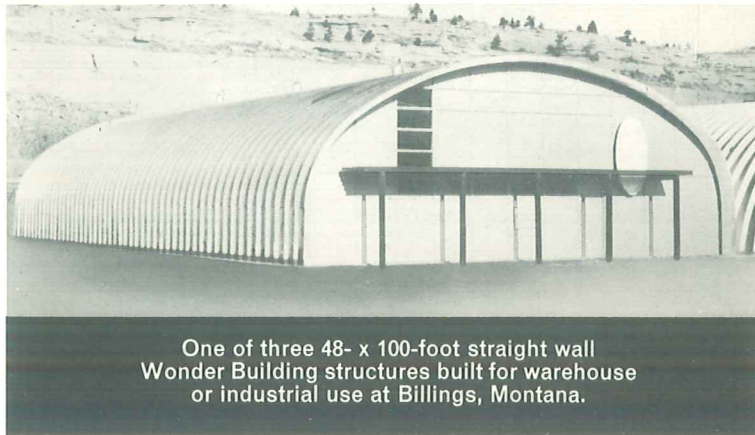
No posts, supports or trusses in this gymnasium erected for Mac Murray College at Jacksonville, Illinois. 100- x 106-foot "Truss-Skin" roof.



*... go on from there!*



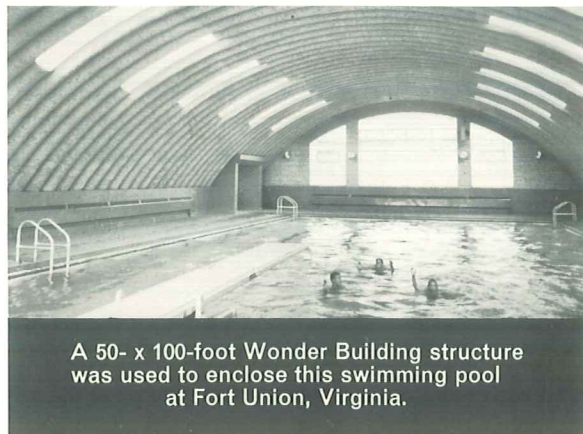
Supermarket at Farmington, New Mexico... constructed with 41- x 104-foot Wonder Building Structure.



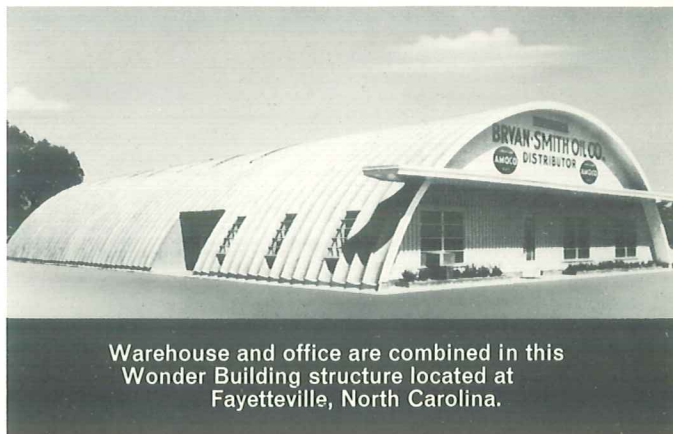
One of three 48- x 100-foot straight wall Wonder Building structures built for warehouse or industrial use at Billings, Montana.



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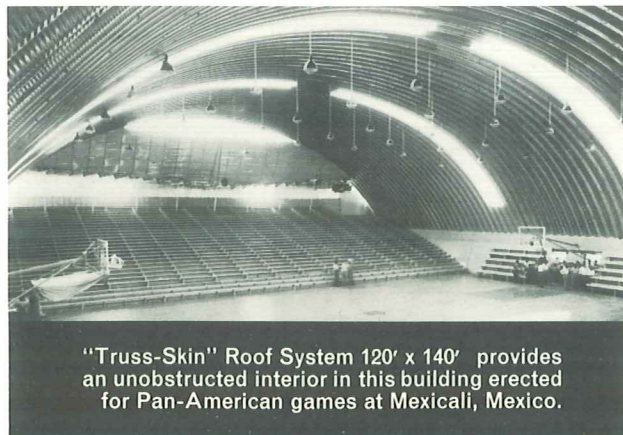
A 50- x 100-foot Wonder Building structure was used to enclose this swimming pool at Fort Union, Virginia.



Warehouse and office are combined in this Wonder Building structure located at Fayetteville, North Carolina.



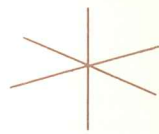
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"Truss-Skin" Roof System 120' x 140' provides an unobstructed interior in this building erected for Pan-American games at Mexicali, Mexico.



Self-Supporting "Truss-Skin" roof with a span of 100 x 262 feet covers civic coliseum at Phoenix, Arizona.



# Build right...*right now!*

WONDER BUILDING...PRACTICAL, LOW-COST ANSWER  
TO QUICK OCCUPANCY...

You could even start tomorrow! Wonder Building gives you economy in design and construction, speed of erection no other type of building can equal! Every panel is precision-made at the factory ...structures go up *fast* — in a matter of days. And there are no hidden costs when you purchase a Wonder Building structure — it arrives at the construction site as a completely packaged unit. Important reasons for accelerating your building program with a modern low-cost Wonder Building structure ... because you can build *right now!*



*See your Wonder Building Distributor*

— for information on specific construction,  
cost estimates and planning assistance.  
He can help you make your building plans a reality.



**wonder trussless building, inc.** 2901 South Cicero Avenue, Chicago, Illinois 60650



**this panel  
supports itself...**

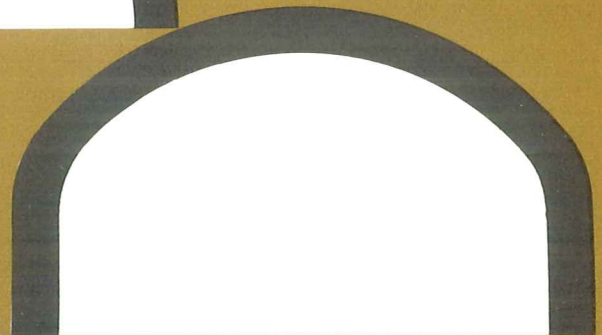
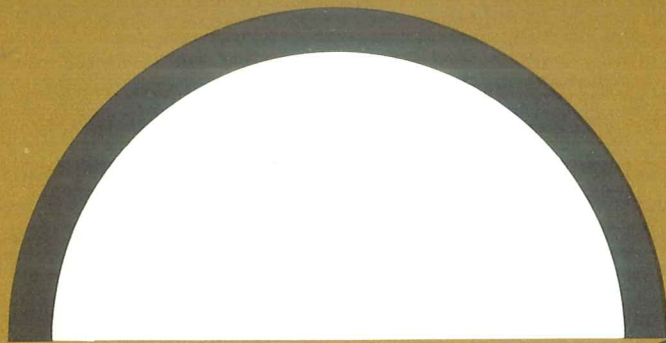








# wonder solutions to industrial building construction







## for low cost construction . . .

Wonder buildings offer more useable floor space at maximum savings plus functional beauty. They are used for additional manufacturing space, new office areas, stock room, laboratory facilities, equipment display or storage, customer or employee areas.

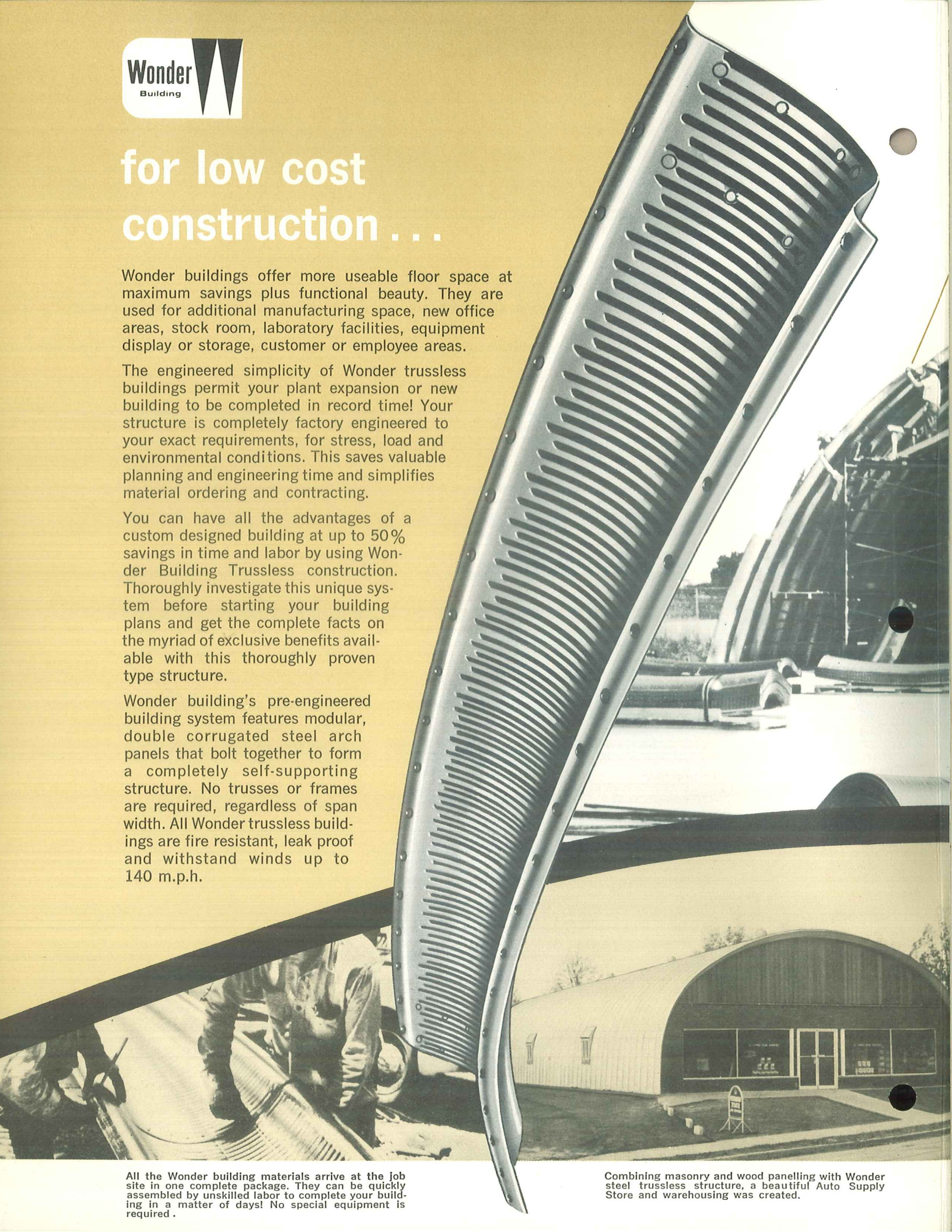
The engineered simplicity of Wonder trussless buildings permit your plant expansion or new building to be completed in record time! Your structure is completely factory engineered to your exact requirements, for stress, load and environmental conditions. This saves valuable planning and engineering time and simplifies material ordering and contracting.

You can have all the advantages of a custom designed building at up to 50% savings in time and labor by using Wonder Building Trussless construction. Thoroughly investigate this unique system before starting your building plans and get the complete facts on the myriad of exclusive benefits available with this thoroughly proven type structure.

Wonder building's pre-engineered building system features modular, double corrugated steel arch panels that bolt together to form a completely self-supporting structure. No trusses or frames are required, regardless of span width. All Wonder trussless buildings are fire resistant, leak proof and withstand winds up to 140 m.p.h.

All the Wonder building materials arrive at the job site in one complete package. They can be quickly assembled by unskilled labor to complete your building in a matter of days! No special equipment is required.

Combining masonry and wood panelling with Wonder steel trussless structure, a beautiful Auto Supply Store and warehousing was created.





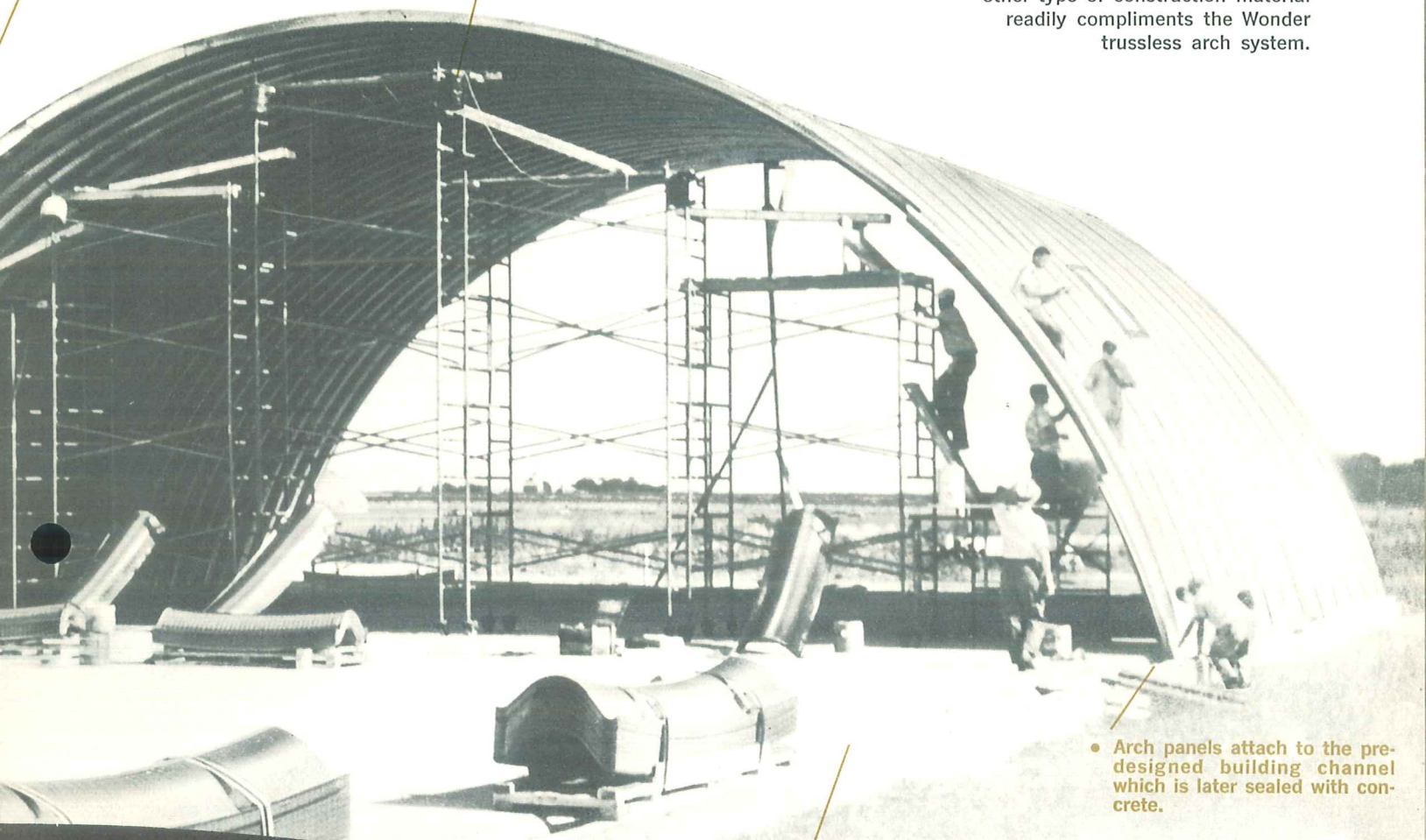
Simple bolted assembly . . . the only fastener required for the trussless arch building is simple nuts and bolts that securely fasten the panels together.

• Wonder panels bolt together to form a self supporting arch. A caulking bead is inserted to seal against weather. Later, any type of insulation may be applied.

• Simple scaffolding supports the panelling until the arches are completed.

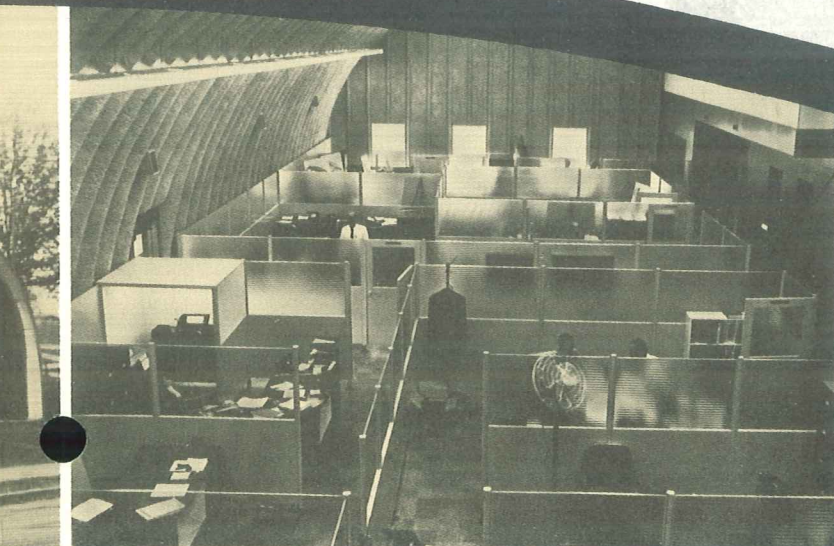
Building accessories such as translucent fibreglass skylights, panels, doors, windows or ventilators can be easily used with the Wonder system. All steel end walls are available in a variety of designs.

Use of masonry, wood or any other type of construction material readily compliments the Wonder trussless arch system.

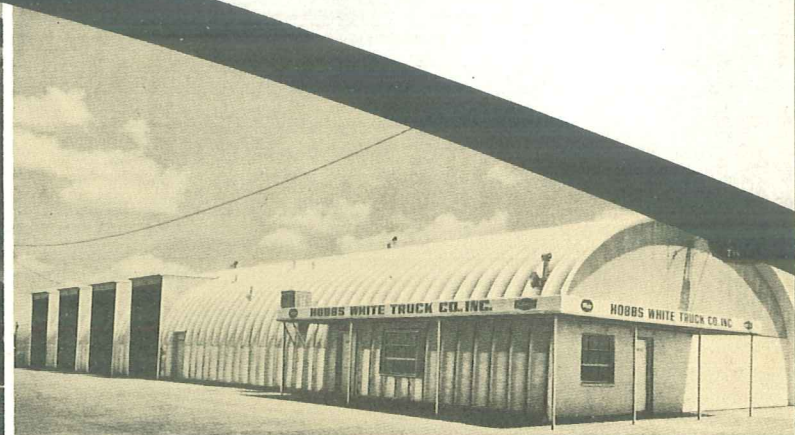


• Arch panels attach to the pre-designed building channel which is later sealed with concrete.

• Concrete foundation is channeled to receive the arched span of modular panels.



Spacious offices without support beams to hamper layout. Translucent fibreglass arch skylight, panels or side windows can be utilized for natural lighting.



End walls and entrances may be designed for functional beauty to suit any architectural style or engineered for the entry of heavy equipment.



# 3

## Basic Designs . . .

### Semi-Circular Wall

Provides buildings up to 64 feet wide with 100% useable floor space. Highly adaptable for manufacturing areas, laboratory facilities or service areas.

Type	Outside width	Center height
300 GR	30'	14'
400 GR	40'	17'
600 GR	62'	21'
3500 GR	35'	15'
4400 GR	41'	20'-4"
5200 GR	51'	18'
6300 GR	64'	23'
7100 GR	70'	24'

### Straight Wall

Versatile "U" design, the most popular industrial type building, provides 100% useable wall area. Especially adaptable for offices or warehousing.

Type	Outside width	Center height
1600 GR	17'	10'
2100 GR	20'	11'-8"
2300 GR	26'	12'
3100 GR	33'	15'
3800 GR	35'	16'
4100 GR	41'	17'
5100 GR	48'	19'
5700 GR	56'	20'
6100 GR	62'	22'

### Trussless Roof Systems

Structure and roof are unified in this low cost method to enclose a large area. Trussless systems can be provided for widths from 20 to 300 feet spans in unlimited lengths.

## Wonder engineering assistance . . .

Wonder Building's engineered consultation is always available for any of your expansion or new construction programs. Complete design data and technical details will be furnished to you or your architect to assist in the erection of the most economical . . . the most functional . . . and the most durable building ever produced. Call the factory — or your local Wonder distributor.



**Wonder Trussless Building, Inc.**

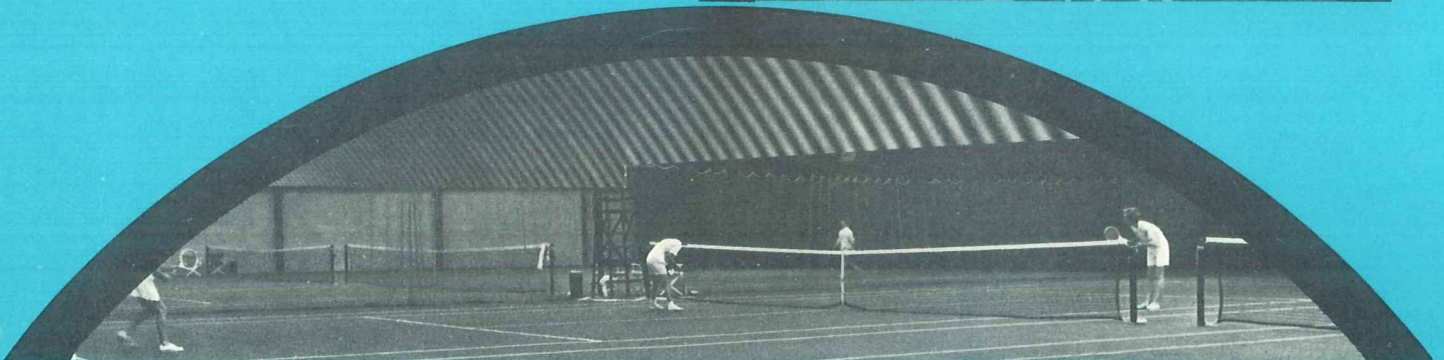
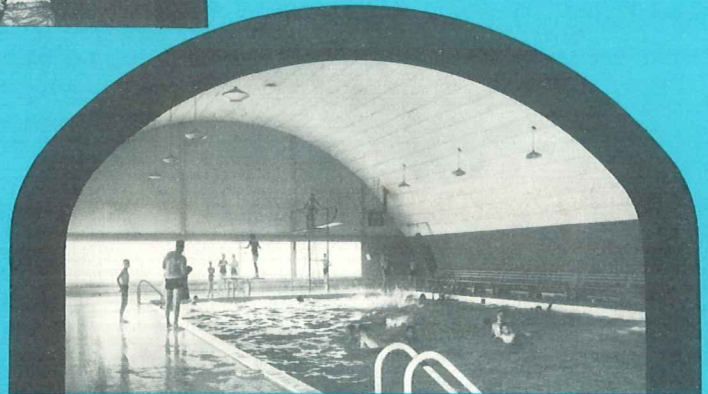
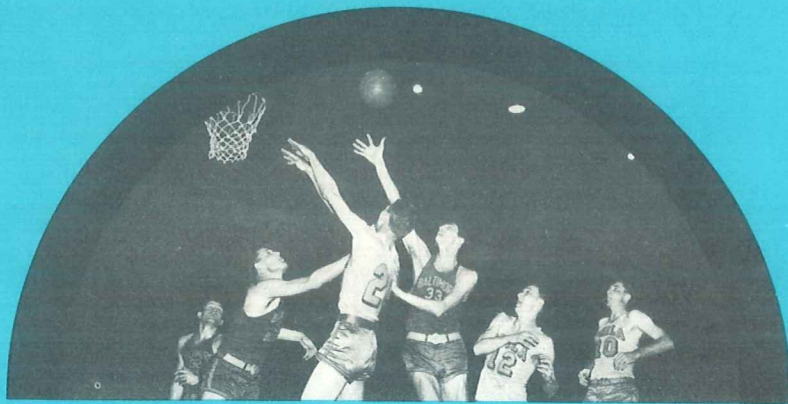
2901 South Cicero Avenue

Chicago, Illinois 60650





year 'round fun  
...the wonder way!







## for low cost construction . . .

Wonder buildings offer architectural beauty plus maximum economy in the construction of recreational structures. Gymnasiums, auditoriums, pool facilities, skating rinks, firing ranges and other uses. Trussless buildings can be erected at a 50% savings in labor and construction time. Wonder trussless buildings are completely factory engineered to your exact requirements to provide maximum floor space use.

Recreational facilities built the Wonder trussless way combine the type of beauty and economy that has gained wide approval of municipal and institutional planning boards. Design versatility plus early occupancy permits recreational programs to proceed on schedule in the most modern facilities.

Wonder buildings' pre-engineered building system features modular, double corrugated steel arch panels that bolt together to form a completely self-supporting span. No trusses or frames are required regardless of span width. All Wonder trussless buildings are fire resistant, leak proof and withstand winds up to 140 m.p.h. Investigate Wonder's unique system when planning your recreational facilities and get the complete facts on ruggedness and building economy.



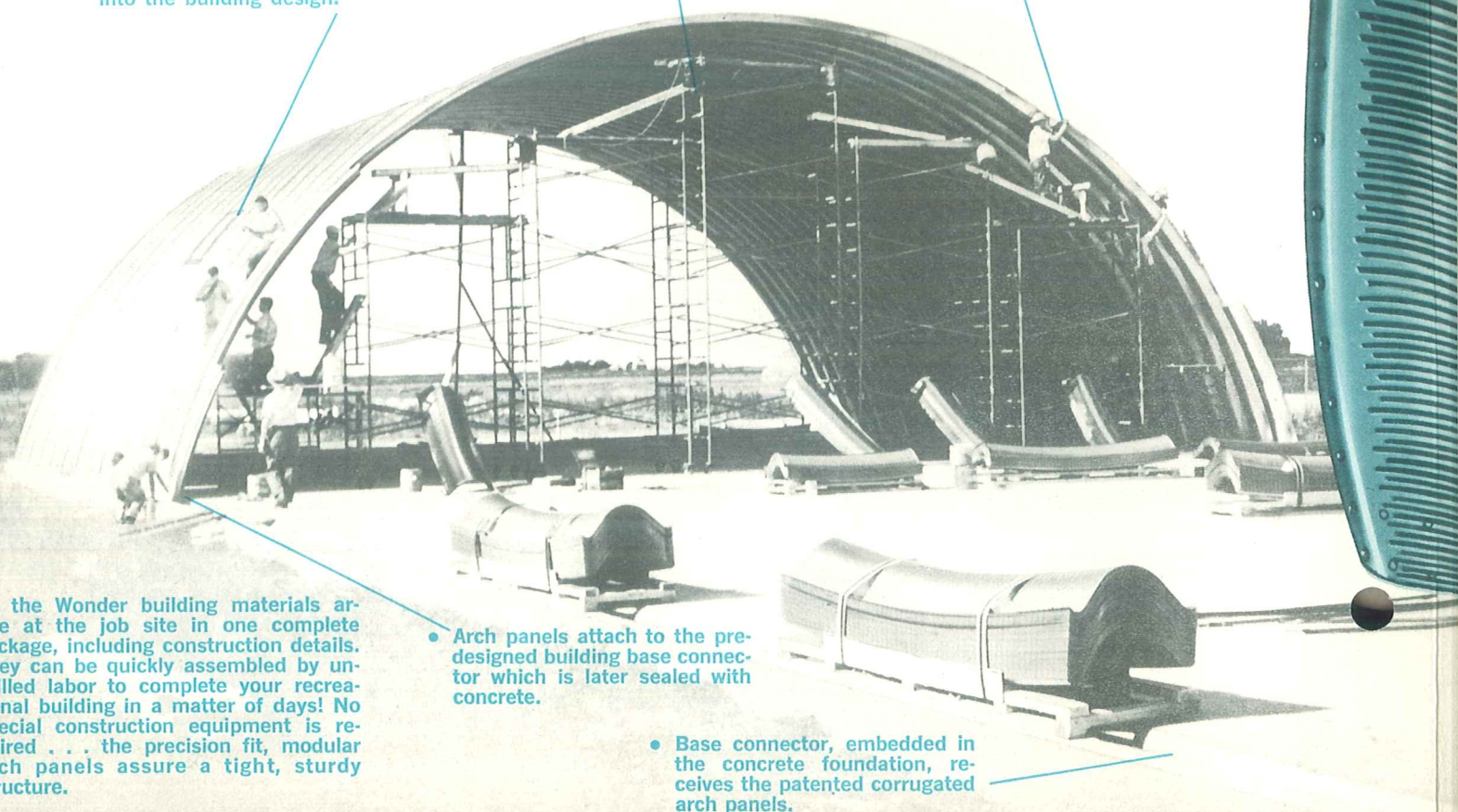
Simple bolted assembly . . . the only fastener required for the trussless arch building is simple nuts and bolts that securely fasten the panels together.

- Building accessories such as translucent fiberglass skylights, panels, doors, windows or ventilators may be easily installed. All-steel end walls are available in a variety of designs; however, masonry, wood or other types of construction materials may be incorporated into the building design.
- Simple scaffolding supports the panelling until the arches are completed.
- Wonder panels bolt together to form a self-supporting arch. A caulking bead is inserted to seal against weather. Later, any type of insulation may be applied.

All the Wonder building materials arrive at the job site in one complete package, including construction details. They can be quickly assembled by unskilled labor to complete your recreational building in a matter of days! No special construction equipment is required . . . the precision fit, modular arch panels assure a tight, sturdy structure.

- Arch panels attach to the pre-designed building base connector which is later sealed with concrete.

- Base connector, embedded in the concrete foundation, receives the patented corrugated arch panels.







This spacious pool provides year-round recreation with a minimum of building maintenance. Natural lighting is utilized with glass panelling at both ends of the building.

This modern gymnasium utilizes the clear span design feature of Wonder buildings for functional beauty and maximum usage of space. No columns, pillars or posts obstruct the spectators view.



# 3 Basic Designs . . .

## Semi-Circular Wall

Provides buildings up to 64 feet wide with 100% useable floor space. Highly adaptable for manufacturing areas, laboratory facilities or service areas.

Type	Outside width	Center height
300 GR	30'	14'
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## Straight Wall

Versatile "U" design, the most popular industrial type building, provides 100% useable wall area. Especially adaptable for offices or warehousing.

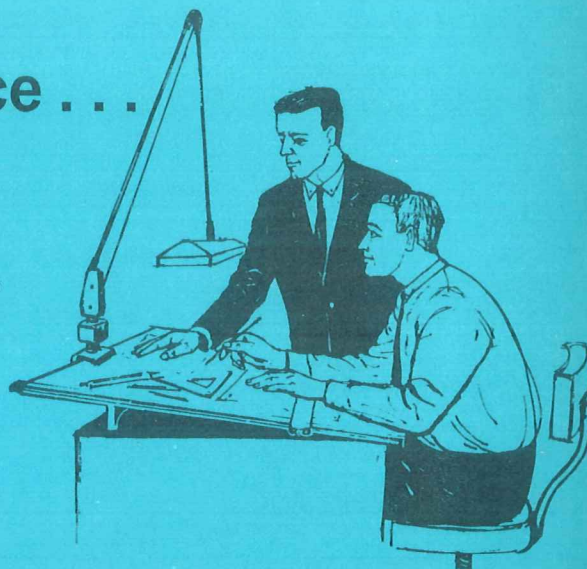
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5100 GR	48'	19'
5700 GR	56'	20'
6100 GR	62'	22'

## Trussless Roof Systems

Structure and roof are unified in this low cost method to enclose a large area. Trussless systems can be provided for widths from 20 to 300 feet spans in unlimited lengths.

## Wonder engineering assistance . . .

Engineering consultation from Wonder building is always available to assist in planning your recreational building. Complete design data and technical details can be furnished to you or to your architect to aid in the erection of the most economical . . . the most functional . . . and the most durable building ever produced. Call the factory or your local Wonder Building distributor.

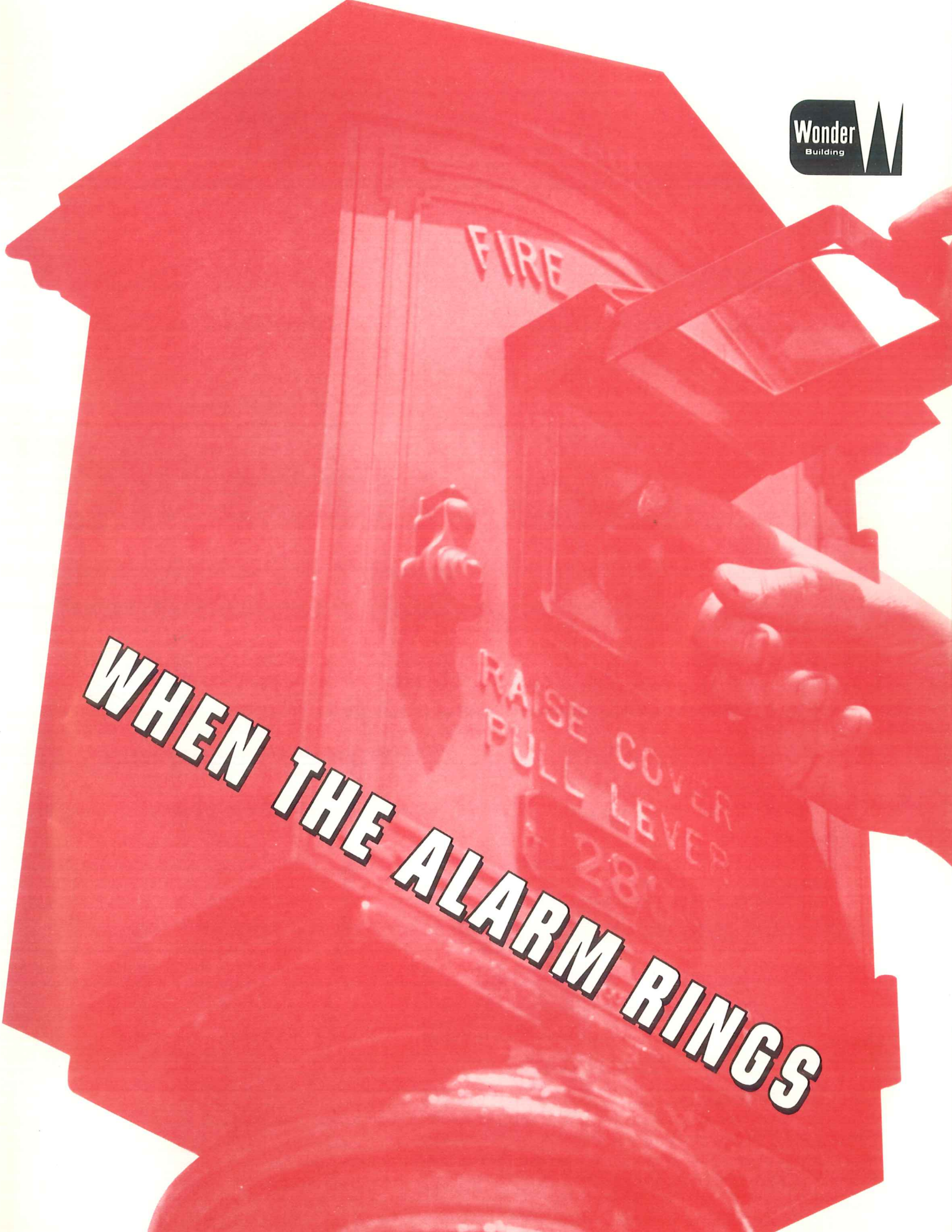


**Wonder Trussless Building, Inc.**

2901 South Cicero Avenue

Chicago, Illinois 60650





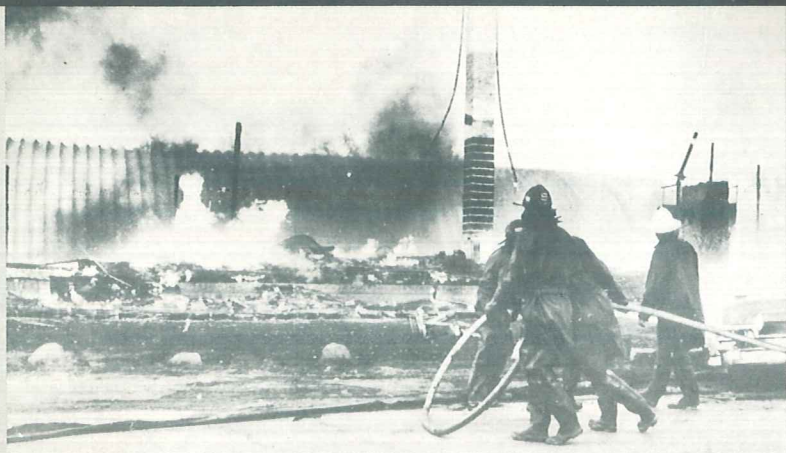
**WHEN THE ALARM RINGS**



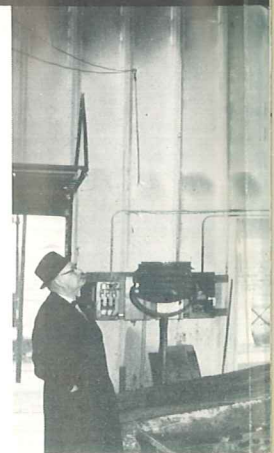
# *you'll be glad that you*

On Saturday, May 4, 1957, a fire completely destroyed the \$66,000.00 Silver Spring Skating Center at 9028 West Silver Spring, Milwaukee, Wisconsin. The building was a 100' x 200' roller skating rink of conventional wood construction. The adjacent patented WONDER BUILDING structure, 64' x 110', of all steel construction is used as an ice skating arena. The WONDER BUILDING structure was four and one-half feet away from the wooden roller rink. This was a five alarm fire and firemen hurried to the scene.

The "double corrugation" for triple strength of the WONDER BUILDING structure, although exposed to the tremendous heat, made allowances for the expansion and contraction of the steel. Other factors of utmost importance are: 1) there is no internal structural load-bearing framework to collapse, and 2) each arch is self-supporting and carries its own weight. The general comment of the people who viewed the damage was, "How could that large metal building withstand such a terrific fire and such intense heat!!" Some of the spectators made the comment that they had seen steel, away from fires, buckle just from the heat.



During the course of the fire the WONDER BUILDING structure was subjected to very intense heat as well as the flames. After the fire the WONDER BUILDING structure was carefully examined and not a single steel panel was found damaged either through buckling or distortion. The WONDER BUILDING structure was as sound as when originally erected.



These photos show the WONDER structure! Fire materials used in this building. In fact, subsequent inspections sound as before!



# chose Wonder building!



that even an internal fire cannot destroy the  
re completely gutted all of the combustible mate-  
ing, but the WONDER roof system stayed intact.  
nspection showed that the roof system was as



The owner, Mr. Edmund Grub, was delighted that he had chosen a WONDER BUILDING structure. The neighbors were also happy that the WONDER BUILDING structure was there since it served as a perfect fire wall and without a doubt saved some of the homes in the area from destruction. Mr. Grub said, "I'm glad and delighted the WONDER BUILDING people sold me on the idea of their building."



# HOW MANY \$ CAN A WONDER BUILDING STRUCTURE SAVE YOU IF YOU DO OR DON'T HAVE A FIRE

The Wonder building structure is of incombustible construction which produces a low insurance rate in comparison to other types of construction that would be required to produce a lower rate. By comparison, the strictly fireproof building with reinforced concrete roof, 12 inch brick walls, cement floor and all steel supports protected by concrete would produce a rate of approximately 15¢ in a town of 7th Class fire protection. Comparing the

Wonder building structure with this class of construction in the same type of fire protection, the Wonder building structure produces a rate of approximately \$.179. However, as a matter of comparison with a building of hollow concrete block walls, cement floor, and wood joisted floor, we are showing the comparative charges that would be applied in a town having fire hydrants and fire departments grading Class 7.

	Wonder Bldg. Structure	Hollow Concrete Block Bldg.	Fireproof
Basis rate, with exclusively incombustible contents.....	.132	.392	.132
Area 40x60 (2400 sq. ft.).....	...	...	...
100% steel perimeter .....	.016	...	...
100% HCB perimeter .....	...	.118	...
Fireproofing of steel .....	.011	...	...
Interior finish, none .....	...	...	...
Combustible eaves .....	...	.020	...
Exposures .....	...	...	...
Stove pipe through roof.....	...	.078	...
Occupancy metalworker (25-10) .....	.010	.134	.010
Wiring defects .....	.01	.03	.01
Building Rate per \$100 of insurance per year.....	.179	.771	.152

The above rate analysis gives a comparison of the gross building rates between the Wonder building structure and a very common type of present day construction as well as with the strictly fireproof, reinforced concrete and brick building which shows that the rate for a Wonder Building structure is slightly higher than a strictly fireproof brick build-

ing, but considerably lower than the ordinary concrete block, wood joisted roof building. These rates, of course, contemplate strictly incombustible contents, if occupied by combustible contents the rates vary depending upon degree of combustibility of the contents.

You can have all the safety and advantages of a custom designed building at up to 50% savings in time and labor by using WONDER BUILDING trussless construction.

Wonder building's pre-engineered building system features modular, double corrugated, steel, arch panels that bolt together to form a completely self-supporting structure. No trusses or frames are required, regardless of span width. All Wonder trussless buildings are fire resistant, leak proof, and withstand winds up to 140 M.P.H.

**Wonder Trussless Building, Inc.**

2901 South Cicero Avenue

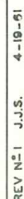
Chicago, Illinois 60650



Phone: (312) 863-6151

PRINTED  
IN  
U.S.A.





PATENTED

**TITLE** INSIDE CLEARANCES  
30' BUILDING 1-7 HOLE AND  
5-19 HOLE SHEETS

WONDER BUILDING  
OF AMERICA

DR. BY J.A.C.

SCALE 1/2" = 1'-0"

DATE	PART NO.
------	----------

5. NO. 426A

426A











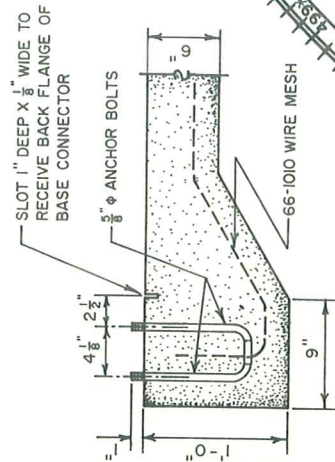




SEE DETAIL "A"

FOUNDATION

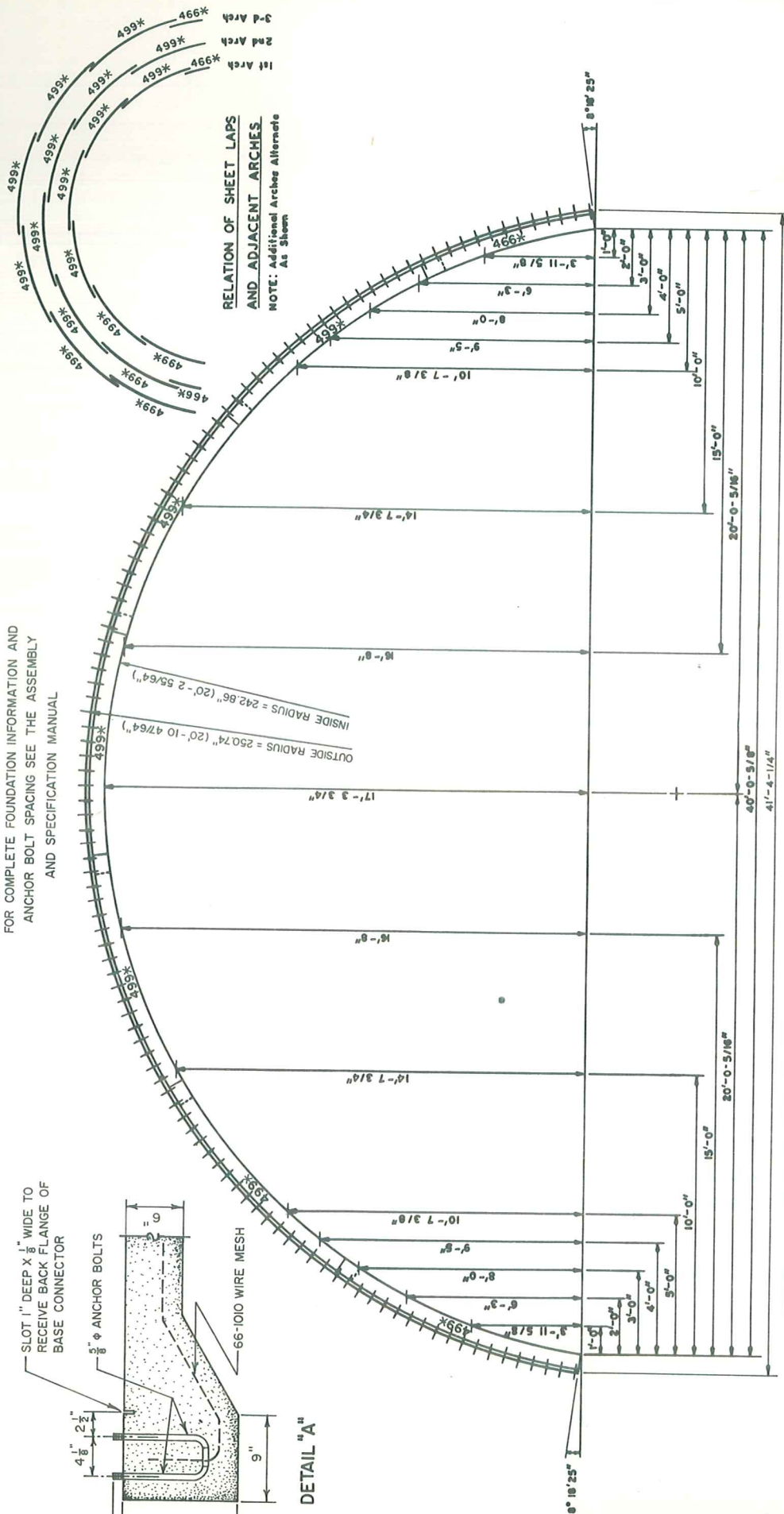
FOR COMPLETE FOUNDATION INFORMATION AND ANCHOR BOLT SPACING SEE THE ASSEMBLY AND SPECIFICATION MANUAL



## DETAIL "A"

**RELATION OF SHEET LAPS**  
**AND ADJACENT ARCHES**  
**NOTE: Additional Arches Alternate As Shown**

As shown



BUILDING INFORMATION		400GR SERIES	
GAUGE NUMBER		TYPE	TYPE
		410GR	420GR
SHIPPING WEIGHT PER RUNNING FOOT		2	3
		204 LBS.	157 LBS.
		13.7 BS.	10.9 BS.
		88 LBS.	450GR
		5	5

NOTE:  
ASTERISK (\*) IS USED IN LIEU  
OF GAUGE NUMBER FOR ALL  
PART NUMBERS ON THIS DRAWING.

PATENTED  
COPYRIGHT 1960

**TITLE INSIDE CLEARANCES**  
40' BUILDING 1-13 HOLE  
AND 6-19 HOLE SHEETS

**400GR**  
SERIES

WONDER BUILDING CORP.  
OF AMERICA

DR. BY	J.A.C.	CHK'D BY	D.C.B.
--------	--------	----------	--------

SCALE	3/8" = 1'-0"	APPR'D BY	R.A.
-------	--------------	-----------	------

DATE	PART NO.	DRWG. NO.
------	----------	-----------





















3	+	-
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SEE DETAIL "A"

SLOT 1" DEEP X 1/8" WIDE TO  
RECEIVE BACK FLANGE OF  
BASE CONNECTOR

5/8"  $\phi$  ANCHOR BOLTS

66-1010 WIRE MESH

DETAIL "A"

## FOUNDATION

FOR COMPLETE FOUNDATION INFORMATION AND  
ANCHOR BOLT SPACING SEE THE ASSEMBLY  
AND SPECIFICATION MANUAL

RELATION OF SHEET LAPS  
AND ADJACENT ARCHES  
NOTE: ADDITIONAL ARCHES  
ALTERNATE AS SHOWN

OUTSIDE RADIUS = 449.0" (37'-5")

INSIDE RADIUS = 441.2" (36'-9 1/8")

24'-2"

23'-2"

21'-5"

18'-9"

15'-0"

9'-5"

8'-0"

6'-5"

4'-0"

5'-0"

10'-0"

15'-0"

20'-0"

25'-0"

30'-0"

34'-7 13/32"

69'-2 13/16"

70'-5 11/16"

24'-2"

23'-2"

21'-5"

18'-9"

15'-0"

9'-5"

8'-0"

6'-5"

4'-0"

5'-0"

10'-0"

15'-0"

20'-0"

25'-0"

30'-0"

34'-7 13/32"

69'-2 13/16"

70'-5 11/16"

24'-2"

23'-2"

21'-5"

18'-9"

15'-0"

9'-5"

8'-0"

6'-5"

4'-0"

5'-0"

10'-0"

15'-0"

20'-0"

25'-0"

30'-0"

34'-7 13/32"

69'-2 13/16"

70'-5 11/16"

24'-2"

23'-2"

21'-5"

18'-9"

15'-0"

9'-5"

8'-0"

6'-5"

4'-0"

5'-0"

10'-0"

15'-0"

20'-0"

25'-0"

30'-0"

34'-7 13/32"

69'-2 13/16"

70'-5 11/16"

24'-2"

23'-2"

21'-5"

18'-9"

15'-0"

9'-5"

8'-0"

6'-5"

4'-0"

5'-0"

10'-0"

15'-0"

20'-0"

25'-0"

30'-0"

34'-7 13/32"

69'-2 13/16"

70'-5 11/16"

24'-2"

23'-2"

21'-5"

18'-9"

15'-0"

9'-5"

8'-0"

6'-5"

4'-0"

5'-0"

10'-0"

15'-0"

20'-0"

25'-0"

30'-0"

34'-7 13/32"

69'-2 13/16"

70'-5 11/16"

24'-2"

23'-2"

21'-5"

18'-9"

15'-0"

9'-5"

8'-0"

6'-5"

4'-0"

5'-0"

10'-0"

15'-0"

20'-0"

25'-0"

30'-0"

34'-7 13/32"

69'-2 13/16"

70'-5 11/16"

24'-2"

23'-2"

21'-5"

18'-9"

15'-0"

9'-5"

8'-0"

6'-5"

4'-0"

5'-0"

10'-0"

15'-0"

20'-0"

25'-0"

30'-0"

34'-7 13/32"

69'-2 13/16"

70'-5 11/16"

24'-2"

23'-2"

21'-5"

18'-9"

15'-0"

9'-5"

8'-0"

6'-5"

4'-0"

5'-0"

10'-0"

15'-0"

20'-0"

25'-0"

30'-0"

34'-7 13/32"

69'-2 13/16"

70'-5 11/16"

24'-2"

23'-2"

21'-5"

18'-9"

15'-0"

9'-5"

8'-0"

6'-5"

4'-0"

5'-0"

10'-0"

15'-0"

20'-0"

25'-0"

30'-0"

34'-7 13/32"

69'-2 13/16"

70'-5 11/16"

24'-2"

23'-2"

21'-5"

18'-9"

15'-0"

9'-5"

8'-0"

6'-5"

4'-0"

5'-0"

10'-0"

15'-0"

20'-0"

25'-0"

30'-0"

34'-7 13/32"

69'-2 13/16"

70'-5 11/16"

24'-2"

23'-2"

21'-5"

18'-9"

15'-0"

9'-5"

8'-0"

6'-5"

4'-0"

5'-0"

10'-0"

15'-0"

20'-0"

25'-0"

30'-0"

34'-7 13/32"

69'-2 13/16"

70'-5 11/16"

24'-2"

23'-2"

21'-5"

18'-9"

15'-0"

9'-5"

8'-0"

6'-5"

4'-0"

5'-0"

10'-0"

15'-0"

20'-0"

25'-0"

30'-0"

34'-7 13/32"

69'-2 13/16"

70'-5 11/16"

24'-2"

23'-2"

21'-5"

18'-9"

15'-0"

9'-5"

8'-0"

6'-5"

4'-0"

5'-0"

10'-0"

15'-0"

20'-0"

25'-0"

30'-0"

34'-7 13/32"

69'-2 13/16"

70'-5 11/16"

24'-2"

23'-2"

21'-5"

18'-9"

15'-0"

9'-5"

8'-0"

6'-5"

4'-0"

5'-0"

10'-0"

15'-0"

20'-0"

25'-0"

30'-0"

34'-7 13/32"

69'-2 13/16"

70'-5 11/16"

24'-2"

23'-2"

21'-5"

18'-9"

15'-0"

9'-5"

8'-0"

6'-5"

4'-0"

5'-0"

10'-0"

15'-0"

20'-0"

25'-0"

30'-0"

34'-7 13/32"

69'-2 13/16"

70'-5 11/16"

24'-2"

23'-2"

21'-5"

18'-9"

15'-0"

9'-5"

8'-0"

6'-5"

4'-0"

5'-0"

10'-0"

15'-0"

20'-0"

25'-0"

30'-0"

34'-7 13/32"

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24'-2"

23'-2"

21'-5"

18'-9"

15'-0"

9'-5"

8'-0"

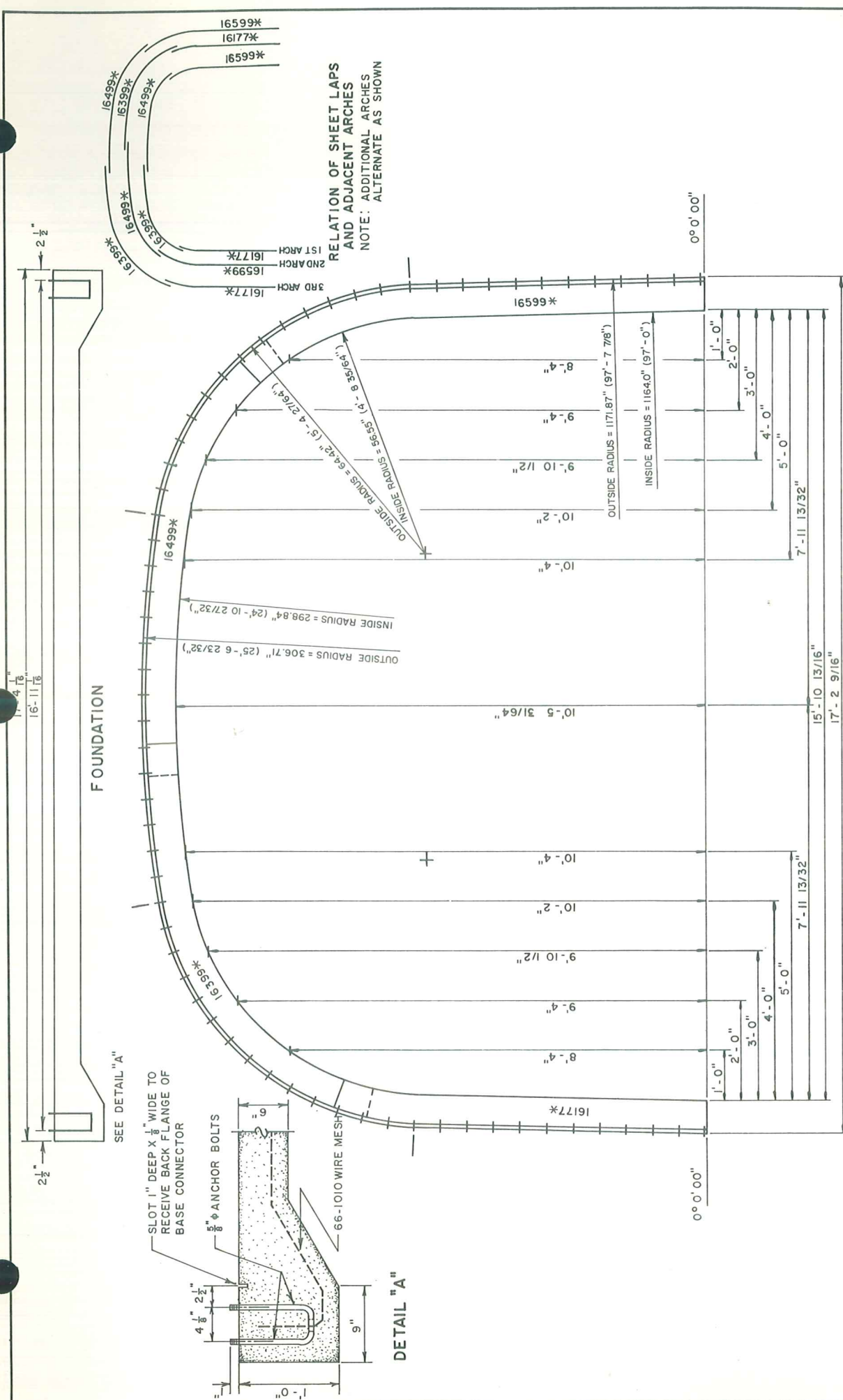
6'-5"

4'-0"

5'-0"







**NOTE:**  
FOR COMPLETE FOUNDATION INFORMATION AND ANCHOR BOLT SPACING SEE THE ASSEMBLY AND SPECIFICATION MANUAL.

**NOTE:**  
FOR ALL PART NUMBERS ON THIS DRAWING.

**BUILDING INFORMATION**

GAUGE NUMBERS	SHIPPING WEIGHT PER RUNNING FOOT	INSIDE FLOOR AREA PER RUNNING FOOT	AREA OF FLOOR INSULATION PER RUNNING FOOT	LENGTH OF FLOORING STRIPS PER RUNNING FOOT	CUBIC CONTENTS PER RUNNING FOOT	AREA OF SPRAYED ON INSULATION PER RUNNING FOOT
1620GR	16.50 FT	32 SQ. FT.	18 SQ. FT.	182 CUB. FT.	42.2 SQ. FT.	

**1600 GR SERIES**

TYPE	TYPE	TYPE	TYPE	TYPE
2	3	4	5	
85 LBS/72 LBS	59 LBS	46 LBS		

**QUANTITIES APPROXIMATE**

**RELATION OF SHEET LAPS AND ADJACENT ARCHES**  
NOTE: ADDITIONAL ARCHES ALTERNATE AS SHOWN

**1600GR**  
16 BUILDING - 3 - 19 HOLE  
1 - 15 HOLE SHEETS

**WONDER BUILDING CORP. OF AMERICA**

**PATENTED**  
COPYRIGHT 1960

**DR. BY R.H.B.**  
**SCALE 3/4" = 1' - 0"**  
**DATE 1 - 4 - 60**

**CHK'D BY D.C.B.**  
**APPR'D BY R.A.**  
**DRWG. NO. 479A**

**PART NO.**  
**1 - 4 - 60**

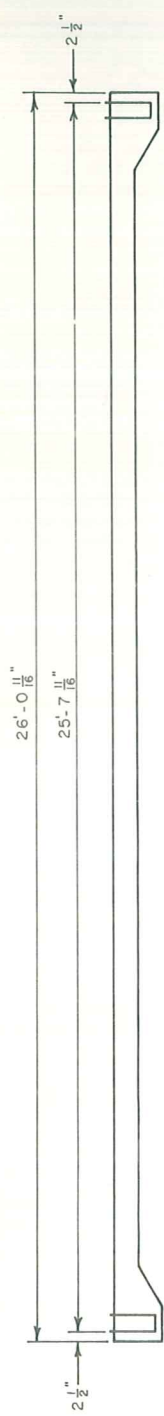






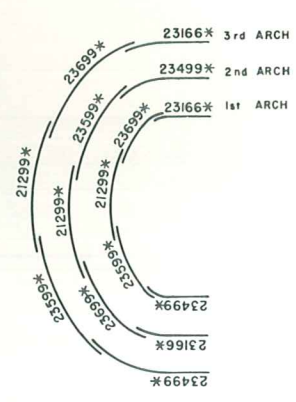






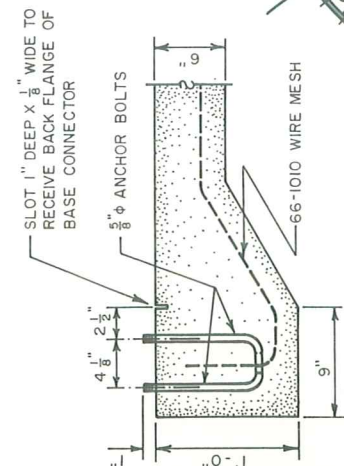
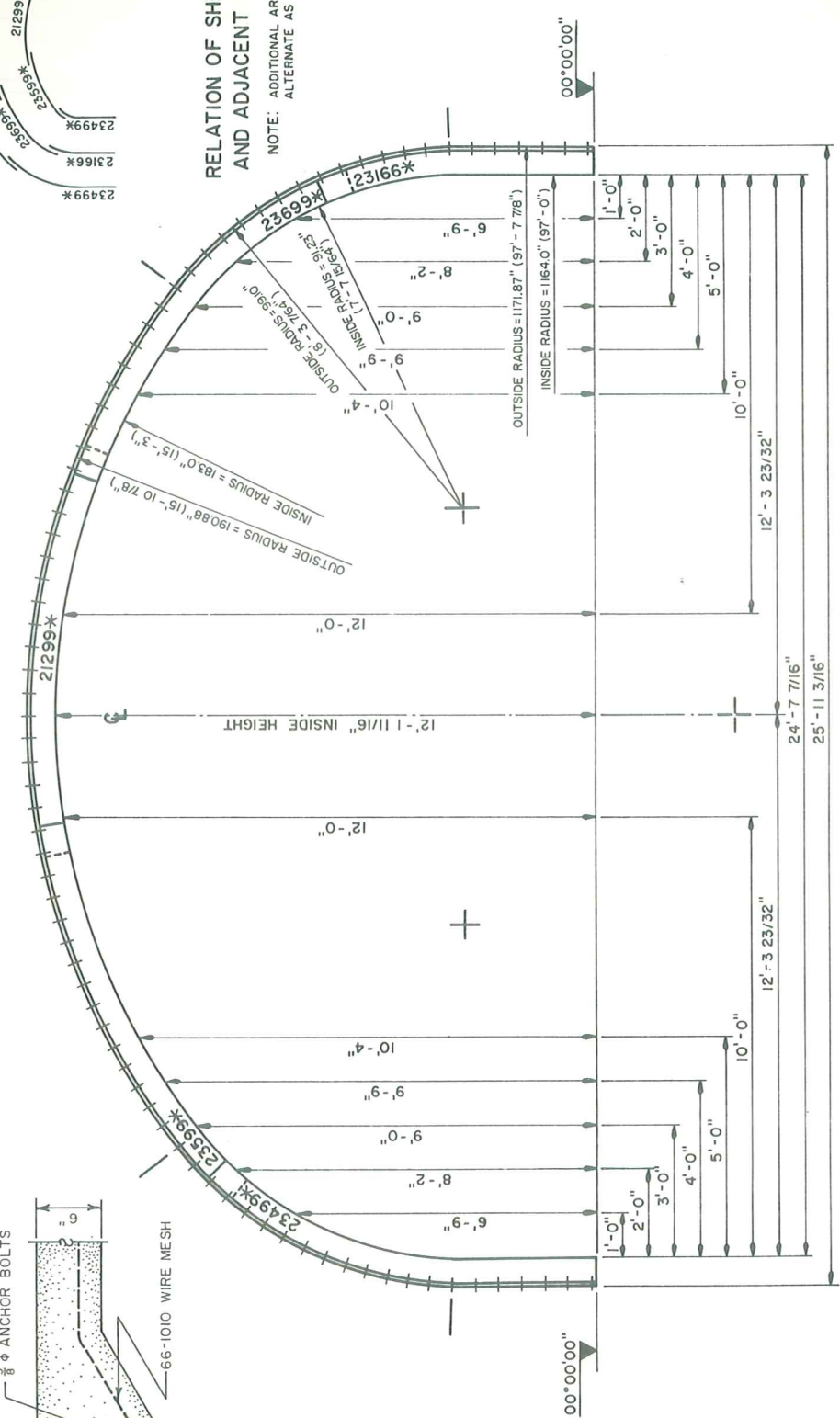
SEE DETAIL "A"

**FOUNDATION**  
FOR COMPLETE FOUNDATION INFORMATION AND  
ANCHOR BOLT SPACING SEE THE ASSEMBLY  
AND SPECIFICATION MANUAL



**RELATION OF SHEET LAPS  
AND ADJACENT ARCHES**

NOTE: ADDITIONAL ARCHES  
ALTERNATE AS SHOWN



**DETAIL "A"**

PATENTED		COPYRIGHT 1960	
TITLE INSIDE CLEARANCES		2300 GR	
25 BUILDING, 4-19 HOLE		SERIES	
AND 1-13 HOLE SHEETS		WONDER BUILDING CORP.	
		OF AMERICA	
DR. BY	J.A.C.	CHK'D BY	D.C.B.
SCALE	1/2" = 1'-0"	APPR'D BY	R.A.
DATE	1-4-60	PART NO.	DRWG. NO.
			453

BUILDING INFORMATION		2300 GR SERIES	
GAUGE NUMBER	2320GR2330GR2340GR	TYPE	TYPE
SHIPPING WEIGHT PER RUNNING FOOT	26 SQ. FT.	2	3
INSIDE FLOOR AREA PER RUNNING FOOT	40 SQ. FT.	III LBS.	93 LBS. 77 LBS.
AREA OF FURRED INSULATION PER RUNNING FOOT	21 FT.	NOTE: ASTERISK (*) IS USED IN LIEU OF GAUGE NUMBER FOR ALL PART NUMBERS ON THIS DRAWING.	
LENGTH OF FURRED STRIPS PER RUNNING FOOT	262 CU. FT.		
CUBIC CONTENTS PER RUNNING FOOT	52 SQ. FT.		
AREA OF SPRAYED-ON INSULATION PER RUNNING FOOT	2'-0"		
MULTIPLES OF LENGTH			







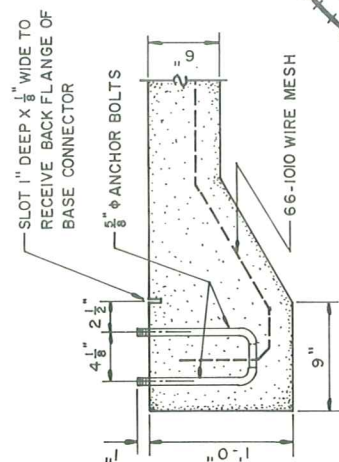




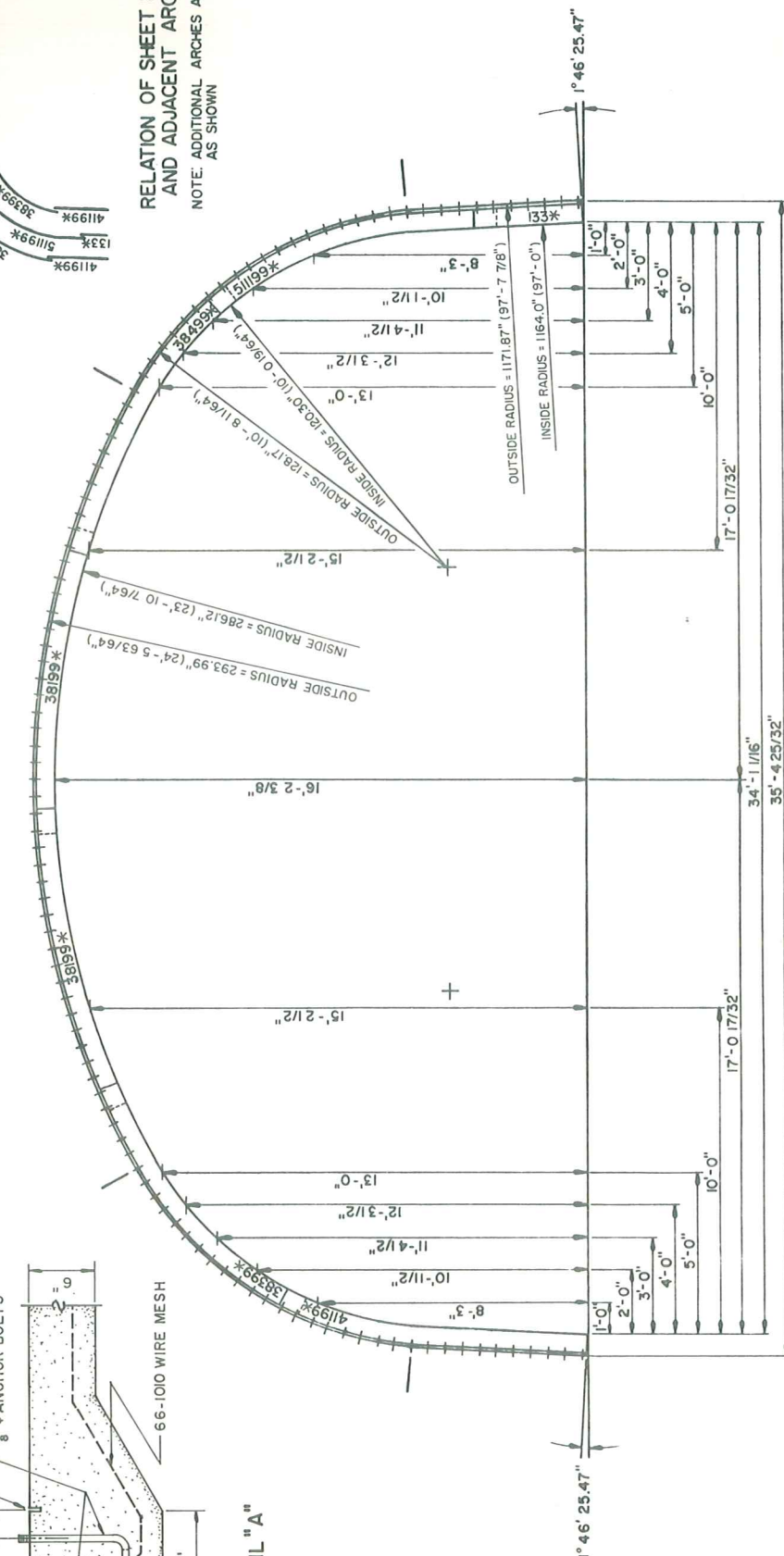
SEE DETAIL "A"

## FOUNDATION

FOR COMPLETE FOUNDATION INFORMATION AND ANCHOR BOLT SPACING SEE THE ASSEMBLY AND SPECIFICATION MANUAL



### DETAIL "A"



RELATION OF SHEET LAPS  
AND ADJACENT ARCHES

BUILDING INFORMATION		3800 GR SERIES	
GAUGE NUMBER	_____		
SHIPPING WEIGHT PER RUNNING FOOT	_____		
INSIDE FLOOR AREA PER RUNNING FOOT	_____ 34 SQ.FT.		
AREA OF FURRED INSULATION PER RUNNING FOOT	_____ 56 SQ.FT.		
LENGTH OF FURRING STRIPS PER RUNNING FOOT	_____ 28 FT		
CUBIC CONTENTS PER RUNNING FOOT	_____ 483 CU.FT.		
AREA OF SPRAYED-ON INSULATION PER RUNNING FOOT	_____ 70.3 SQ.FT.		
QUANTITIES APPROXIMATE			

TYPE	TYPE	TYPE
3820GR	3820GR	3830GR
1	2	3
93 LBS	147 LBS	126 LBS

NOTE:  
 ASTERISK (\*) IS USED  
 IN LIEU OF GAUGE  
 NUMBER FOR ALL  
 PART NUMBERS ON  
 THIS DRAWING.

PATENTED  
COPYRIGHT 1960

<p><b>TITLE INSIDE CLEARANCES</b>  <b>34' BLDG. - 6-19 HOLE AND</b>  <b>1-7 HOLE SHEETS</b></p>	<p><b>3800GR</b>  <b>SERIES</b></p>
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**WONDER BUILDING CORP.  
OF AMERICA**

DR. BY J.C.	CHK'D BY D.C.B.
-------------	-----------------

SCALE 3/8" = 1'-0"	APPROVED BY R. A.
--------------------	-------------------

DATE	PART NO.	DRWG. NO.
1-4-60		459A

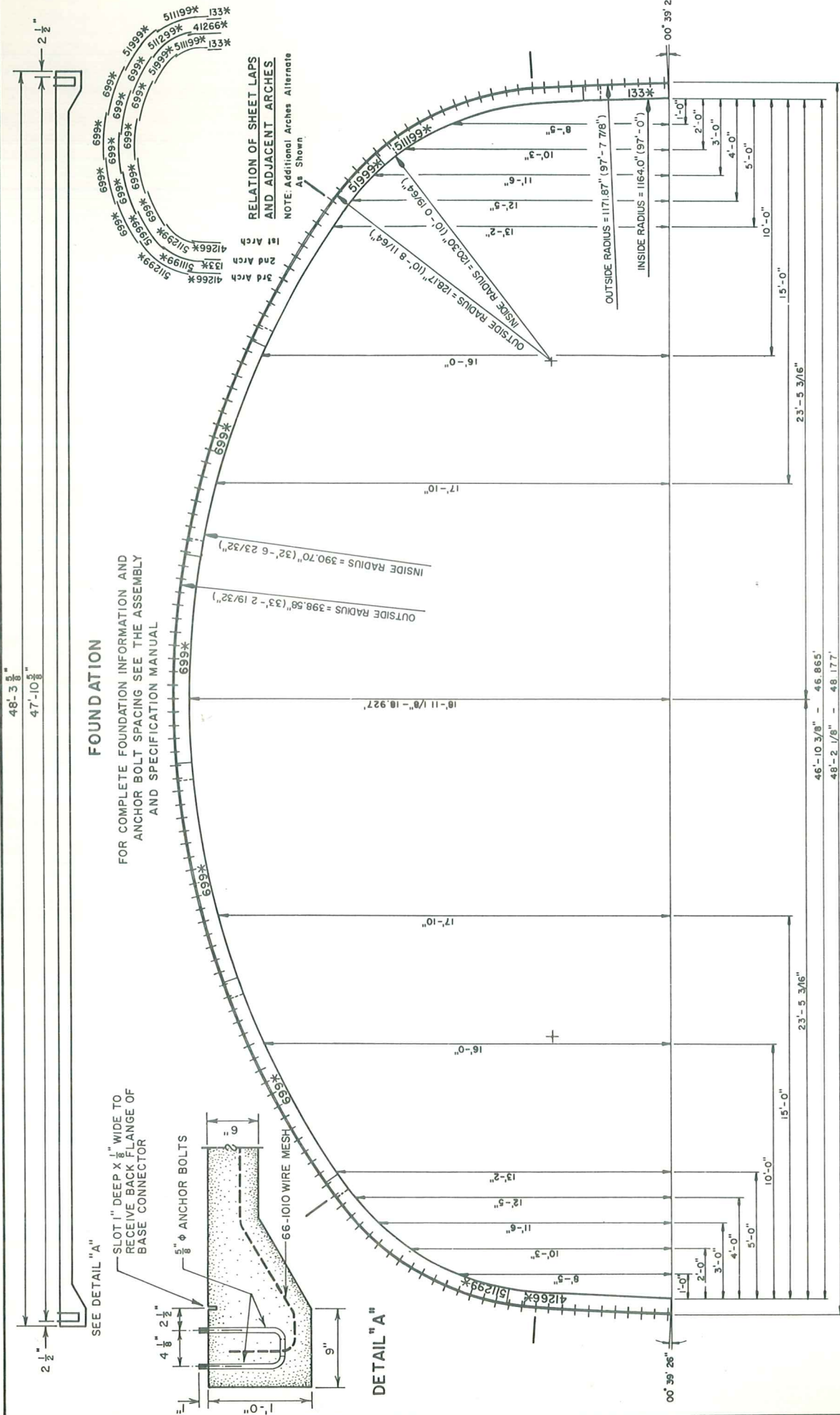












### FOUNDATION

FOR COMPLETE FOUNDATION INFORMATION AND ANCHOR BOLT SPACING SEE THE ASSEMBLY AND SPECIFICATION MANUAL

RELATION OF SHEET LAPS AND ADJACENT ARCHES  
NOTE: Additional Arches Alternate As Shown

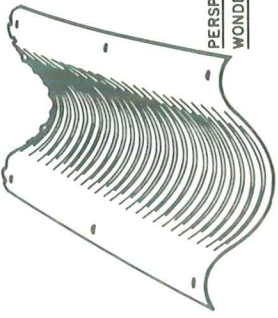
SEE DETAIL "A"

SLOT 1" DEEP X 1/2" WIDE TO RECEIVE BACK FLANGE OF BASE CONNECTOR

5" Ø ANCHOR BOLTS

66-1010 WIRE MESH

### DETAIL "A"



PERSPECTIVE VIEW OF WONDER BUILDING ARCH

BUILDING INFORMATION		5100GR SERIES	
GAUGE NUMBER	5100 GR	TYPE	5100 GR
SHIPPING WEIGHT PER RUNNING FOOT	47 SQ. FT.	TYPE	5100 GR
INSIDE FLOOR AREA PER RUNNING FOOT	69 1/2 SQ. FT.	TYPE	5100 GR
AREA OF FURRED INSULATION PER RUNNING FOOT	34 FT.	TYPE	5100 GR
LENGTH OF FURRING STRIPS PER RUNNING FOOT	767 CU. FT.	TYPE	5100 GR
CUBIC CONTENTS PER RUNNING FOOT	87 SQ. FT.	TYPE	5100 GR
AREA OF SPRAYED-ON INSULATION PER RUNNING FOOT	87 SQ. FT.	TYPE	5100 GR
QUANTITIES APPROXIMATE			

NOTE:  
ASTERISK (\*) IS USED IN LIEU OF GAUGE NUMBER FOR ALL PART NUMBERS ON THIS DRAWING.

PATENTED

TITLE INSIDE CLEARANCE

47' BLDG 7-19 HOLE 1-13

HOLE AND 1-7 HOLE SHEETS

5100GR

SERIES

WONDER BUILDING CORP.

OF AMERICA

DR. BY J.A.C.

CHK'D BY D.C.B.

SCALE 3/8" = 1'-0"

APPR'D BY R.A.

DATE 1-4-60

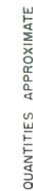
PART NO.

DRWG. NO. 466A

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BUILDING INFORMATION		6100 GR SERIES		TYPE	TYPE
				6110 GR	6170 GR
GAUGE NUMBER _____				7	
SHIPPING WEIGHT PER RUNNING FOOT _____					
INSIDE FLOOR AREA PER RUNNING FOOT _____		61 SQ.FT.			
AREA OF FURRED INSULATION PER RUNNING FOOT _____		81.5 SQ.FT.			
LENGTH OF FURRING STRIPS PER RUNNING FOOT _____		42 FT.			
CUBIC CONTENTS PER RUNNING FOOT _____		107 CU.FT.			
AREA OF SPRAYED-ON INSULATION PER RUNNING FOOT _____		107.4 SQ.FT.			
QUANTITIES APPROXIMATE		NOTE : ASTERISK (*) IS USED IN LIEU OF GAUGE NUMBER FOR ALL PART NUMBERS ON THIS DRAWING.			





# GENERAL INFORMATION & ERECTION NOTES

## READ INSTRUCTIONS THROUGH COMPLETELY BEFORE STARTING ERECTION

### (A) PERMITS:

WHEN BUILDING PERMITS ARE REQUIRED, THEY SHOULD BE OBTAINED PRIOR TO STARTING WORK.

### (B) MINIMUM TOOLS REQUIRED:

1. 9/16" WRENCH OR SOCKET (8 PT.) AND A 1/2" BOX WRENCH. (A POWER OR IMPACT WRENCH WILL SPEED ERECTION IF AVAILABLE.)
2. CARTRIDGE TYPE CAULKING GUN.
3. DRIFT PINS (MINIMUM OF THREE 3/16" X 9" DRIFT PUNCHES PER WORKMAN.)
4. SCREW DRIVER.
5. LADDER.
6. EXTENSION CORD IF POWER WRENCH IS USED.
7. 12" CRESCENT WRENCH.
8. MEASURING TAPE.

### (C) FOUNDATION:

1. THE FOUNDATION MUST BE LEVEL, SQUARE AND ACCURATE FOR PROPER ERECTION OF BUILDING.
2. FOUNDATION DETAILS SHOWN IN FIGURE NUMBER 1 SHOULD BE CHECKED WITH LOCAL SOIL CONDITIONS AND CODE REQUIREMENTS.

### (D) RECEIVING BUILDING MATERIALS:

1. USE CARE IN UNLOADING SO AS NOT TO DAMAGE BUILDING MATERIAL.
2. CHECK PACKING LIST FOR ANY SHORTAGE AND CHECK FOR ANY DAMAGED PARTS.
3. PLACE BUILDING MATERIAL AT SPACED INTERVALS ON EACH SIDE OF FOUNDATION FOR MOST CONVENIENT USE IN ERECTION. PROTECT NESTED STEEL PANELS FROM PROLONGED DAMPNES.

### (E) SCAFFOLDING:

1. SCAFFOLDING MUST SUPPORT ARCHES AT POINTS SHOWN ON SCAFFOLDING DIAGRAM.
2. SCAFFOLDING MUST BE PORTABLE.
3. USE SUFFICIENT DECKING SO THAT ALL BOLTS ARE WITHIN EASY REACH.

TITLE GENERAL BUILDING ASSEMBLY INFORMATION			
WONDER TRUSSLESS BUILDING, INC. CHICAGO, ILL.			
DR. BY	W.M.B.	CHK'D BY	D.C.B.
SCALE	NO SCALE	APPR'D BY	R.A.
DATE	12-29-58	PART NO.	DRWG. NO. 409A





# STEP - 1

## PREPARING FOUNDATION

NOTE:  
PREPARE SITE BY LEVELING AND GRADING. STANDARD BUILDING PRACTICE FOR THE LOCALITY SHOULD BE ADHERED TO IN PREPARING THE SUBBASE FOR THE LAYING OF A SLAB FLOOR.

BUILDING SERIES	DIMENSION			
	A	B	C	D
300GR	31'-2 1/8"	29'-7 1/8"	5"	9 1/2"
400GR	41'-4 1/8"	39'-10"	5"	9 1/8"
600GR	61'-11 1/8"	60'-4 3/8"	7"	9 1/2"
2100GR	20'-0"	18'-6"	4"	9 1/2"
2300GR	25'-11 1/8"	24'-5 3/8"	4"	9"
3100GR	33'-2 3/8"	31'-6 3/8"	4"	9"
3500GR	35'-0 1/8"	33'-5 1/8"	5"	9 1/2"
3800GR	35'-4 1/8"	33'-10 1/8"	4"	9"
4100GR	41'-0"	39'-6"	4"	9"
5100GR	48'-2 1/8"	46'-8 1/8"	4"	9"
5200GR	51'-2 1/8"	49'-7 1/8"	6"	9 1/2"
5700GR	55'-11 3/8"	54'-5 3/8"	4"	9"
6100GR	62'-3 1/8"	60'-9 1/8"	4"	9"
6300GR	63'-11 1/8"	62'-4 1/8"	6"	9 1/2"
7100GR	70'-5 1/8"	68'-10 1/8"	5"	9 1/2"

DIMENSION "A"  
THIS DIMENSION MUST BE ACCURATELY HELD WHEN FORMING SLOT IN FOUNDATION

DIMENSION "B"

WIDTH DIMENSION

DIMENSION "D"

DIMENSION "C"

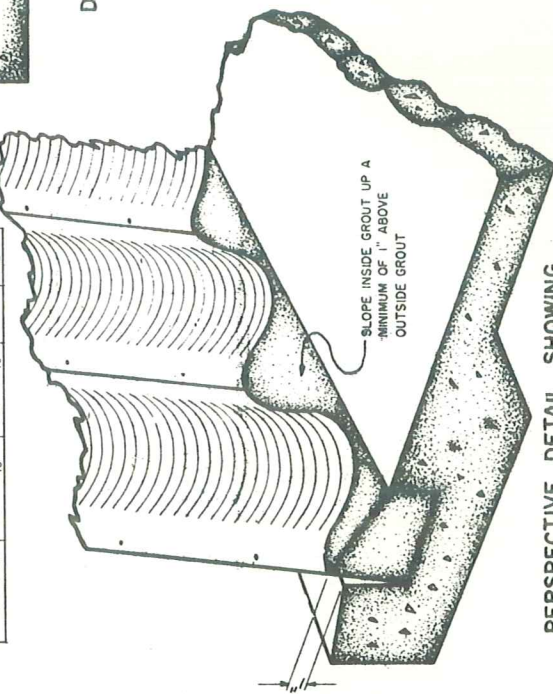
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DETAIL "A"

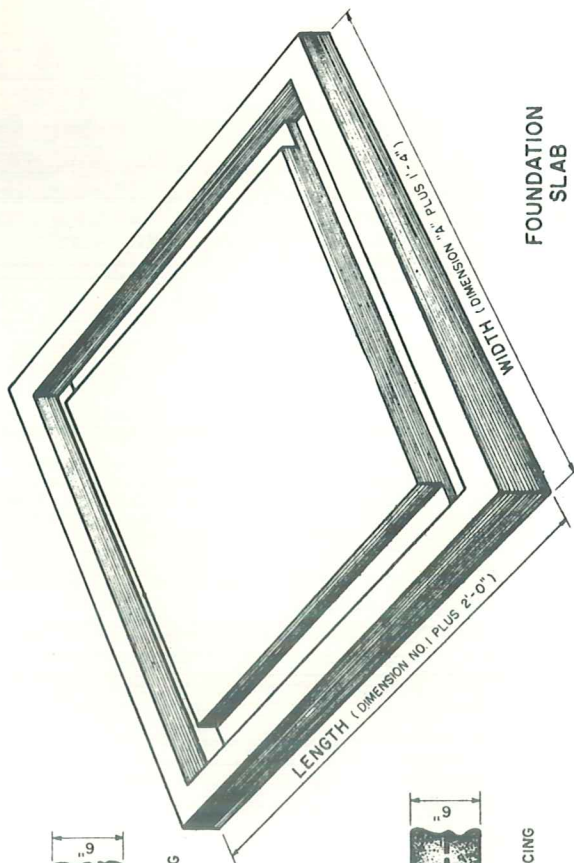
BUILDING LENGTH

REINFORCING

DETAIL "B"



PERSPECTIVE DETAIL SHOWING METHOD OF PLACING GROUT IN SLOT IN FOUNDATION



FOUNDATION SLAB

LENGTH DIMENSION

NOTE: LENGTH DIMENSIONS

- 1 EQUALS LENGTH OF BUILDING IN FEET
- 2 EQUALS LENGTH OF BUILDING IN FEET MINUS ONE FOOT
- 3 EQUALS LENGTH OF BUILDING IN FEET PLUS ONE FOOT

FORMS EASIER TO REMOVE IF SIDE FORMS GIVEN SLIGHT SLOPE FROM TOP TO BOTTOM

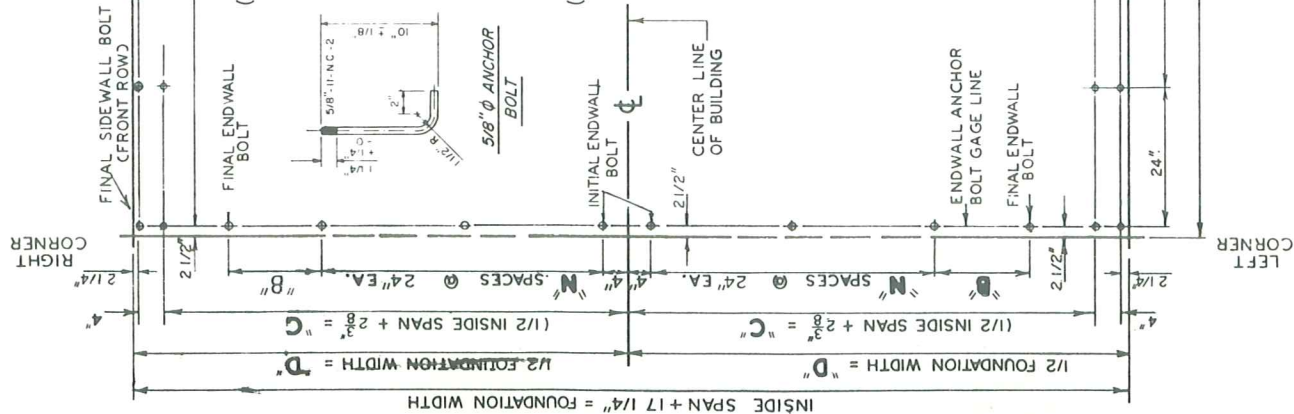
THIS STAKE USED TO SUPPORT BOTTOM FORM OF CHANNEL AND MAY BE LEFT IN PLACE WHEN FORMS ARE REMOVED. SET STAKES AT CORRECT HEIGHT BEFORE PLACING FORMS ON THEM.

TITLE		STANDARD FOUNDATION DETAILS	
WONDER TRUSSLESS BUILDING, INC. CHICAGO, ILL			
DR. BY J.C.		CHK'D BY D.C.B.	
SCALE NO SCALE		APPR'D BY R.A.	
DATE 12-29-58	PART NO.	DRWG. NO. 500-IGR	

DETAIL FORMING CHANNELS IN SLAB







### (A) PREPARING FOUNDATION

PREPARE SITE BY LEVELING AND GRADING. STANDARD BUILDING PRACTICE FOR THE LOCALITY SHOULD BE ADHERED TO IN PREPARING THE SUBBASE FOR THE SLAB FLOOR OR FOUNDATION WALL.

LAYOUT FORM WORK USING DIMENSIONS ACCORDING TO FIGURE 1A AND SCHEDULE 1. IF LARGE FOUNDATION IS BEING CONSTRUCTED, CHECK SQUARENESS OF CORNERS BY METHOD SHOWN IN FIGURE 1A AND DIMENSION "A" OF SCHEDULE 1. FOR ANY SIZE FOUNDATION THE METHOD IN FIGURE 1B CAN BE USED.

LOCATE CENTER LINE OF BUILDING ACCURATELY. ALL DIMENSIONS RELATING TO LOCATION OF ANCHOR BOLTS ARE BASED UPON THE CENTER LINE OF THE BUILDING.

### (B) LOCATING ANCHOR BOLTS

ENDWALL BASE CONNECTOR:

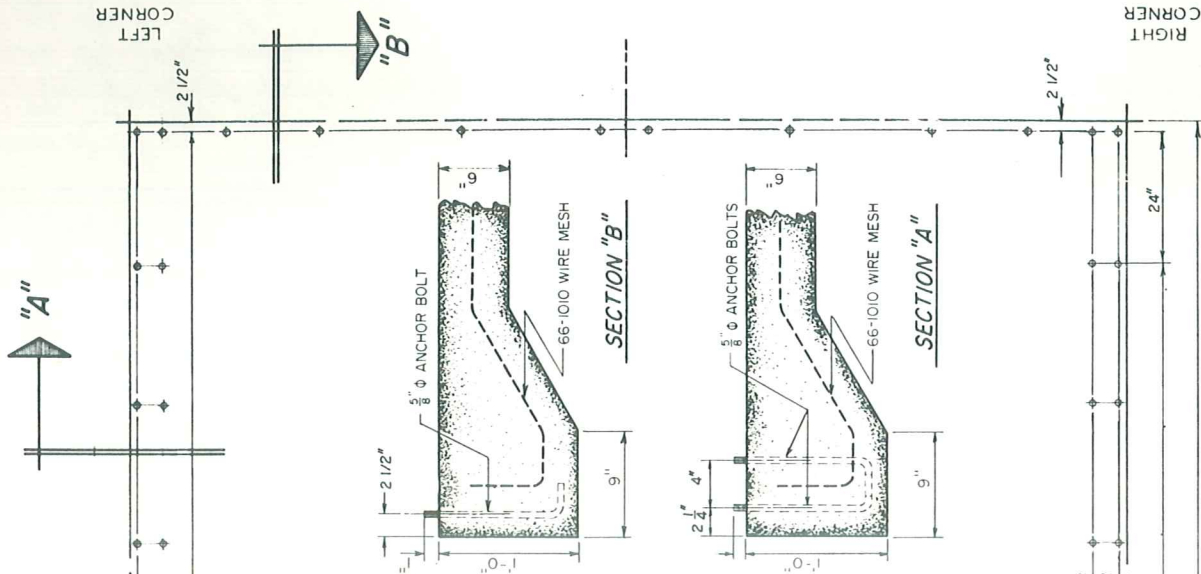
A RECOMMENDED INSTALLATION PROCEDURE FOR THE ENDWALL BASE CONNECTOR ANCHOR BOLTS IS TO NAIL 1" X 6" BOARDS TO TOP OF FORMS (AS SHOWN IN FIGURE 1C). STARTING 4" FROM CENTER LINE OF BUILDING ON A LINE 2 1/2" FROM, AND PARALLEL TO, EDGE OF ENDWALL FOUNDATION, MARK ENDWALL ANCHOR BOLT POSITIONS 24" O.C. LEFT AND RIGHT OF BUILDING CENTER LINE. ONLY FINAL ENDWALL ANCHOR BOLT, IN EACH CORNER, SHOULD BE POSITIONED SPECIAL "B" DISTANCE ON CENTER FROM ITS PRECEDING BOLT. SEE FIGURE 1 AND SCHEDULE 1.

NO ENDWALL ANCHOR BOLT SHOULD BE CLOSER THAN 10" FROM EDGE OF SIDEWALL FOUNDATION.

MAKE CERTAIN ENDWALL ANCHOR BOLTS ARE EXACTLY IN LINE.

DRILL 3/4" HOLES IN 1" X 6" BOARDS AS STATED IN INSTRUCTIONS AND SHOWN IN FIGURE 1.

PLACE ENDWALL BASE CONNECTOR OVER 1" X 6" BOARDS TO CHECK ACCURACY OF HOLES DRILLED. REMOVE ENDWALL BASE CONNECTOR. INSERT ANCHOR BOLTS FROM UNDERSIDE, ATTACH WASHERS AND NUTS SO THAT THREADS OF ANCHOR BOLT CAN BE SEEN BELOW 1" X 6" BOARD.



## FOUNDATION OR SLAB LAYOUT

### FIG. 1

TITLE			
FOUNDATION OR SLAB LAYOUT			
WONDER TRUSSLESS BUILDING, INC. CHICAGO, ILL.			
DR. BY	R. R. B. B.	CHK'D BY	D. C. B.
SCALE	NO SCALE	APPR'D BY	R. A.
DATE	12-29-58	PART NO.	DRWG. NO.
			410





# SCHEDULE I —

NOTE: ANCHOR BOLT POSITIONS CAN BE MARKED AND DRILLED ON 1" X 6" BOARD PRIOR TO NAILING ON FORMWORK, PROVIDING ACCURATE PLACEMENT WITH RESPECT TO CENTER LINE OF BUILDING. ANCHOR BOLT GAUGE LINES IS STRICTLY ADHERED TO.

## SIDEWALL BASE CONNECTOR:

A RECOMMENDED INSTALLATION PROCEDURE FOR THE SIDEWALL BASE CONNECTOR ANCHOR BOLTS IS TO DRILL NAIL "X"160 BOARD TO TOP OF FORMS (AS SHOWN IN FIGURE 1D), STARTING IN LEFT CORNER OF BUILDING CENTER LINE AND ON ENDWALL GAUGE LINE, MARK INNER ROW AND OUTER ROW OF SIDEWALL ANCHOR BOLTS 24" O.C. FROM CONTINUE PROCEDURE ALONG SIDEWALL TO OPPOSITE END OF FOUNDATION, ENDING WITH FINAL BOLTS 4" APART.

ON OPPOSITE SIDEWALL HAVE SIMILAR LOCATIONS, SEE FIGURE 1C. CHECK POSITIONS OF ANCHOR BOLT MARKS FROM CENTER LINE OF BUILDING USING DIMENSION "c". FROM SCHEMATIC AS SHOWN FIGURE 1.

DRILL 3/4" HOLES IN 1" X 10" BOARDS AS STATED IN INSTRUCTIONS AND SHOWN IN FIGURE 1.

PLACE SIDEWALL BASE CONNECTOR OVER 1"X10" BOARDS TO CHECK ACCURACY OF HOLES DRILLED. REMOVE SIDEWALL BASE CONNECTOR, INSERT ANCHOR FROM UNDERSIDE, ATTACH WASHERS AND NUTS SO THAT THREADS OF ANCHOR BOLT CAN BE SEEN BELOW 1"X10" BOARD.

SIDEWALL ANCHOR BOLT GAUGE LINES MUST BE STRAIGHT AND PARALLEL TO EACH OTHER AND PERPENDICULAR TO ENDWALL ANCHOR BOLT GAUGE LINES. CHECK SIDEWALL ANCHOR BOLT GAUGE LINES AT INTERVALS ALONG LENGTH OF FOUNDATION BY USING-DIMENSION "C". A CHECK ON SQUARENESS OF SIDEWALL AND ENDWALL ANCHOR BOLT GAUGE LINES CAN BE MADE BY USING METHOD SHOWN IN FIGURE 1B.

NOTE: ANCHOR BOLT POSITIONS CAN BE MARKED AND DRILLED ON 1" X 10" BOARD PRIOR TO NAILING ON FORMWORK. PROVIDE ACCURATE PLACEMENT WITH RESPECT TO CENTER LINE OF BUILDING AND ANCHOR BOLT GAUGE LINES IS ADHERED TO.

THE ABOVE MENTIONED PROCEDURES, VARIATION OF THESE PROCEDURES, OR ANY OTHER METHOD THAT GIVES ACCURATE PLACEMENT OF ANCHOR BOLTS MAY BE USED.

POUR THE FOUNDATION. BEFORE CONCRETE SETS CHECK ALL ANCHOR BOLTS FOR CORRECT ALIGNMENT AND HEIGHT.

THE METHODS DESCRIBED IN THIS MANUAL ARE BASIC AND MAY BE ADAPTED TO PERIMETER FOOTINGS AND FOUNDATION WALLS WITH A MAXIMUM THICKNESS OF 9 1/2".

[illegible]

NOTES:

NOTE:  
THE DIMENSIONS SHOWN IN SCHEDULE  
I HAVE BEEN CALCULATED TO THE  
NEAREST 1/32" AND MAY BE CHANGED  
TO THE NEAREST 1/8" WHEN  
MEASURING FOR FORMWORK AND  
ANCHOR BOLT PLACEMENT.

TITLE

SCHEDULE I

WONDER TRUSSLESS BUILDING, INC.  
CHICAGO, ILL.

DR. BY	R.H.B	CHK'D BY	D.C.B.
--------	-------	----------	--------

SCALE	NO SCALE	APPR'D BY	R.A.
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DATE	PART NO.	DRWG. NO.
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12-29-58	410A
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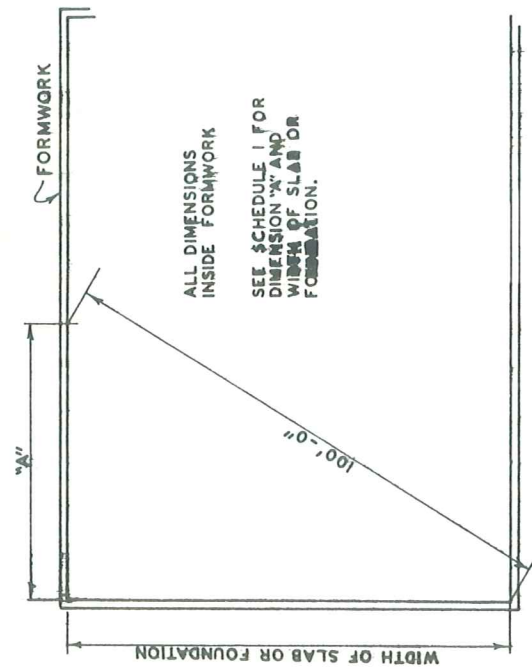
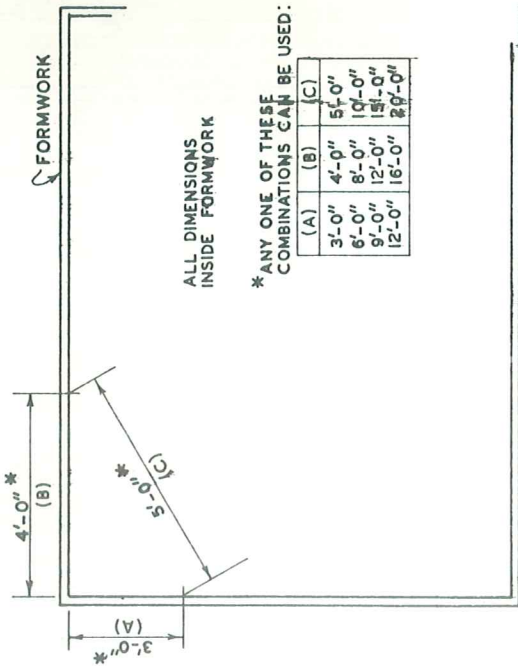


FIGURE 1A



ALL DIMENSIONS  
INSIDE FORMWORK

\* ANY ONE OF THESE  
COMBINATIONS CAN BE USED:

(A)	(B)	(C)
3'-0"	4'-0"	5'-0"
6'-0"	8'-0"	10'-0"
9'-0"	12'-0"	13'-0"
12'-0"	16'-0"	20'-0"

FIGURE 1B

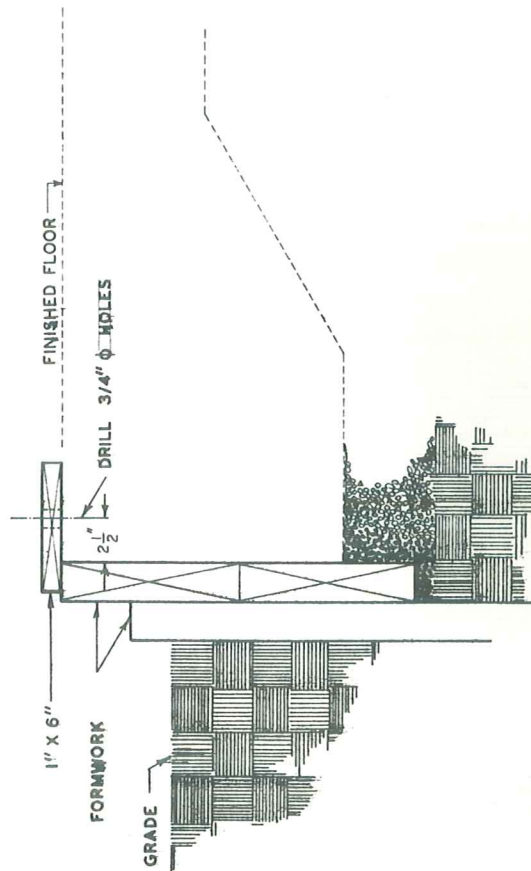


FIGURE 1C

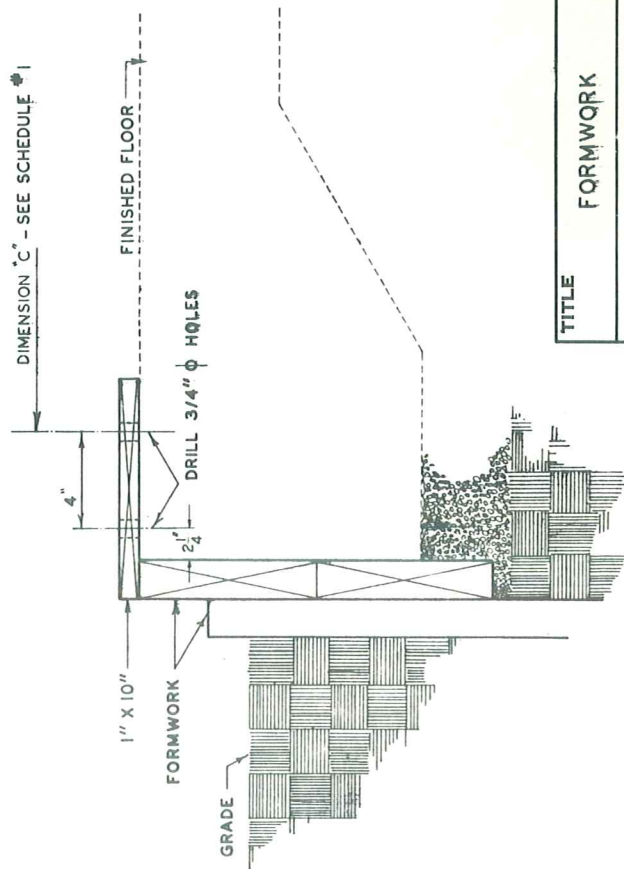
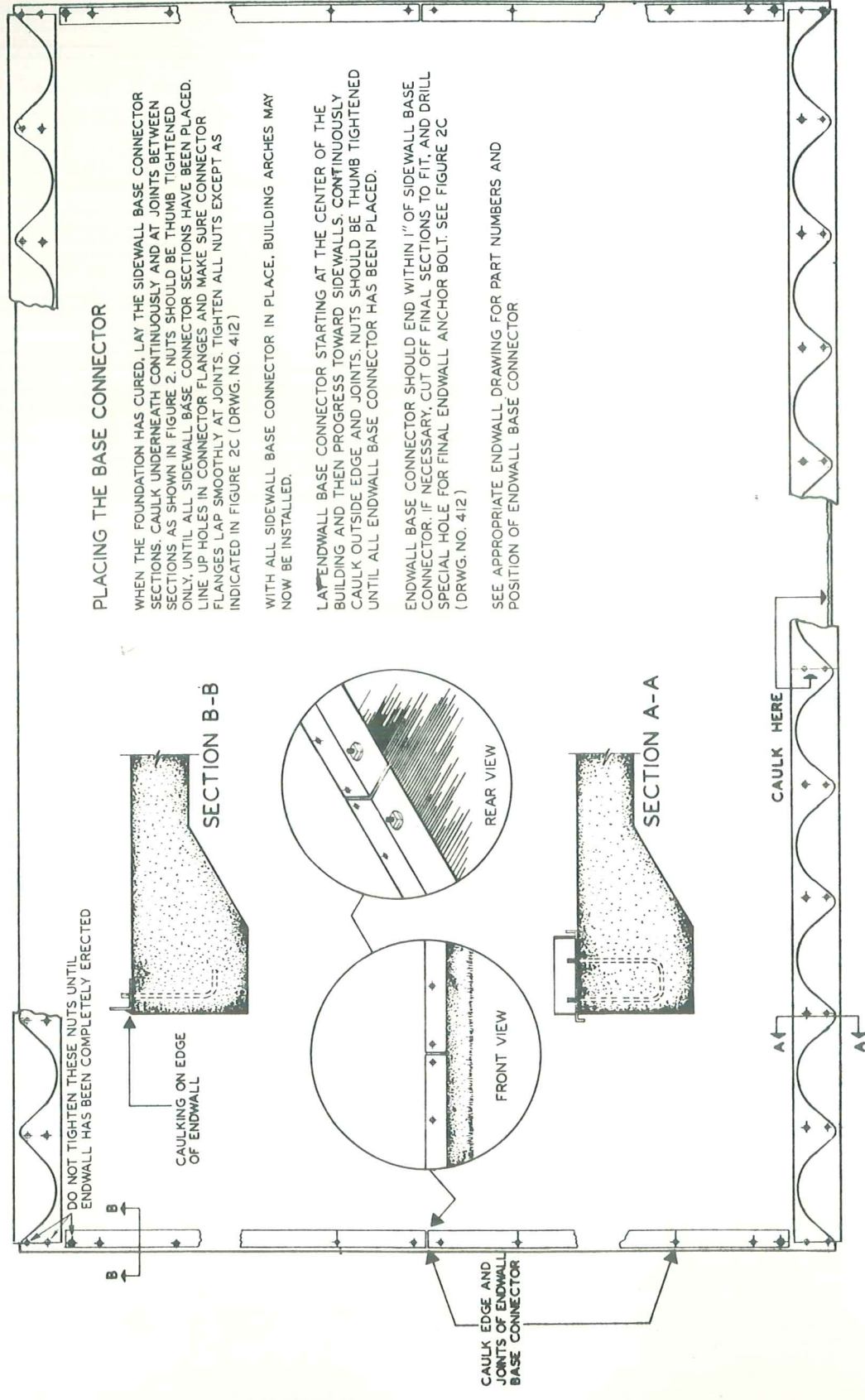


FIGURE 1D

TITLE		FORMWORK	
WONDER TRUSSLESS BUILDING, INC. CHICAGO, ILL.			
DR. BY R.H.B.	CHK'D BY D.C.B.		
SCALE NO SCALE	APPR'D BY R.A.		
DATE 12-29-58	PART NO.	DRWG. NO. 411	







### PLACING THE BASE CONNECTOR

WHEN THE FOUNDATION HAS CURED, LAY THE SIDEWALL BASE CONNECTOR SECTIONS, CAULK UNDERNEATH CONTINUOUSLY AND AT JOINTS BETWEEN SECTIONS AS SHOWN IN FIGURE 2. NUTS SHOULD BE THUMB TIGHTENED ONLY, UNTIL ALL SIDEWALL BASE CONNECTOR SECTIONS HAVE BEEN PLACED. LINE UP HOLES IN CONNECTOR FLANGES AND MAKE SURE CONNECTOR FLANGES LAP SMOOTHLY AT JOINTS. TIGHTEN ALL NUTS EXCEPT AS INDICATED IN FIGURE 2C (DRWG. NO. 412)

WITH ALL SIDEWALL BASE CONNECTOR IN PLACE, BUILDING ARCHES MAY NOW BE INSTALLED.

LAY ENDWALL BASE CONNECTOR STARTING AT THE CENTER OF THE BUILDING AND THEN PROGRESS TOWARD SIDEWALLS. CONTINUOUSLY CAULK OUTSIDE EDGE AND JOINTS. NUTS SHOULD BE THUMB TIGHTENED UNTIL ALL ENDWALL BASE CONNECTOR HAS BEEN PLACED.

ENDWALL BASE CONNECTOR SHOULD END WITHIN 1" OF SIDEWALL BASE CONNECTOR. IF NECESSARY, CUT OFF FINAL SECTIONS TO FIT, AND DRILL SPECIAL HOLE FOR FINAL ENDWALL ANCHOR BOLT. SEE FIGURE 2C (DRWG. NO. 412)

SEE APPROPRIATE ENDWALL DRAWING FOR PART NUMBERS AND POSITION OF ENDWALL BASE CONNECTOR

## SIDEWALL AND ENDWALL BASE CONNECTOR

LAYOUT  
FIG. 2

TITLE			
SIDEWALL AND ENDWALL BASE CONNECTOR			
WONDER TRUSSLESS BUILDING, INC. CHICAGO, ILL.			
DR. BY	CHK'D BY	D.C.B.	
SCALE	NO. SCALE	APPR'D BY	R.A.
DATE	12-29-58	PART NO.	DRWG. NO.











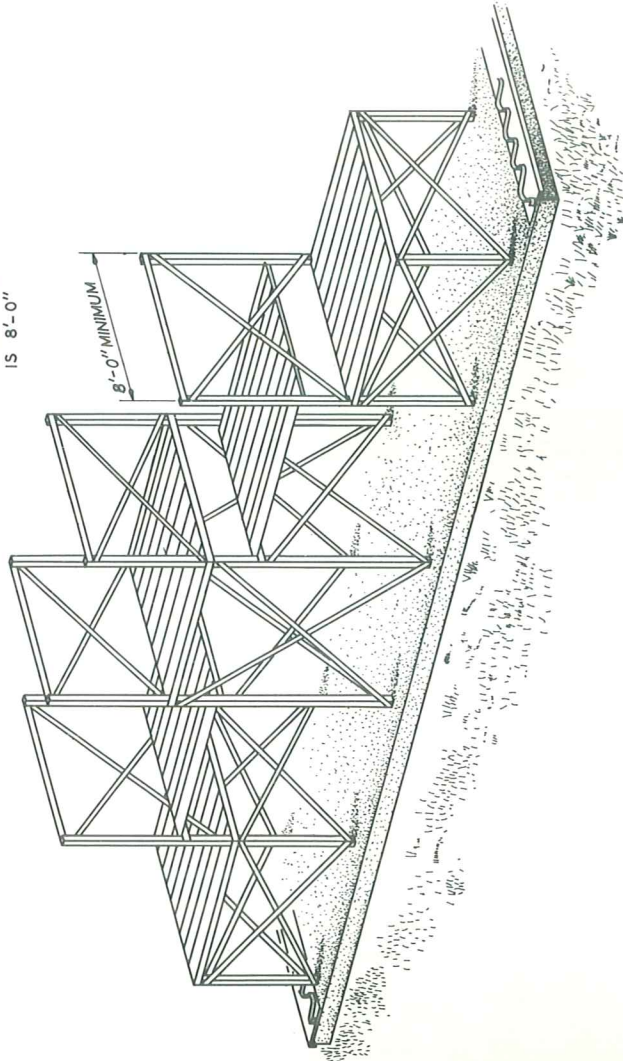
PREPARING THE SCAFFOLDING

THE ARCHES BEING ASSEMBLED MUST BE SUPPORTED AT THE POINTS INDICATED IN SCHEDULE II.

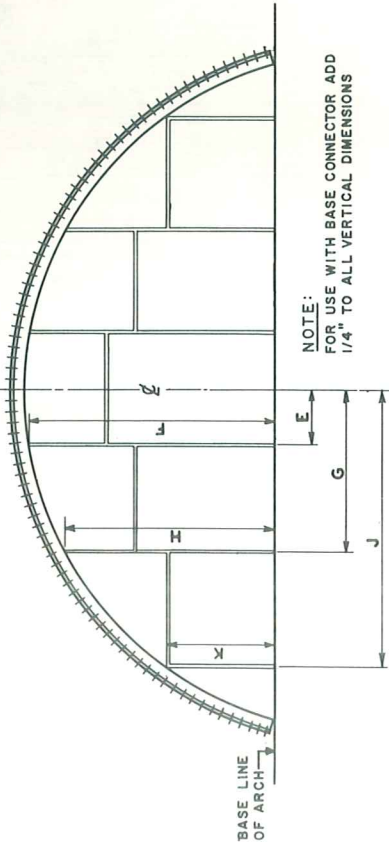
SUFFICIENT DECKING SHOULD BE USED SO THAT ALL BOLTS ARE WITHIN EASY REACH.

IT IS RECOMMENDED THAT STEEL SCAFFOLDING BE USED, IF IT IS NOT AVAILABLE A MOVEABLE WOODEN SCAFFOLDING SUCH AS THE ONE ILLUSTRATED BELOW, CAN BE CONSTRUCTED FROM ANY TYPE OF LUMBER, PROVIDED IT IS STRONG ENOUGH TO SUPPORT THE BUILDING ARCHES AND WORKCREW.

NOTE:  
A RECOMMENDED MINIMUM  
WIDTH FOR SCAFFOLDING  
IS 8'-0"



SCHEDULE II



GR. SERIES	E	F	G	H	J	K
300GR	—	—	4'-6"	13'-6 3/4"	12'-6"	7'-6 5/8"
400GR	—	—	6'-6"	16'-2 7/8"	14'-6"	11'-2 3/8"
600GR	5'-0"	20'-5 1/2"	16'-0"	16'-7 1/8"	26'-0"	7'-10 9/16"
2100GR	—	—	3'-0"	11'-6 7/8"	8'-0"	9'-6 7/8"
2300GR	—	—	4'-0"	11'-7 1/4"	8'-0"	9'-10 1/2"
3100GR	—	—	5'-0"	14'-9 13/16"	15'-0"	7'-9 9/16"
3500GR	—	—	4'-0"	14'-2 1/8"	12'-0"	9'-6 3/8"
3800GR	—	—	5'-0"	15'-8"	15'-0"	10'-1 1/4"
4100GR	—	—	6'-0"	16'-6 1/2"	16'-0"	11'-7 5/8"
5100GR	5'-0"	18'-6 1/2"	13'-0"	16'-2 5/8"	21'-0"	10'-11 5/8"
5200GR	4'-0"	18'-7 5/8"	12'-0"	15'-8 3/8"	20'-0"	9'-3 1/8"
5700GR	4'-0"	19'-10 1/8"	12'-0"	17'-11 1/8"	22'-0"	12'-4"
6100GR	5'-0"	22'-2 1/4"	16'-0"	19'-1 3/8"	26'-0"	12'-3 3/8"
6300GR	5'-0"	23'-4 3/8"	16'-0"	19'-6 1/8"	26'-0"	10'-9 7/8"
7100GR	8'-0"	23'-6 3/8"	20'-0"	18'-5 3/4"	30'-0"	8'-10 9/16"

NOTE:  
THE DIMENSIONS SHOWN IN SCHEDULE II  
HAVE BEEN CALCULATED TO THE NEAREST  
1/16" AND MAY BE CHANGED TO THE  
NEAREST 1/8".

TITLE  
— SCAFFOLDING —

WONDER TRUSSLESS BUILDING, INC.  
CHICAGO, ILL.

DR. BY R. R. B. B. CHK'D BY D. C. B. B.

SCALE NO. SCALE APPROVED BY R. A. B.

DATE 12-29-58 PART NO. DRWG. NO. 419A

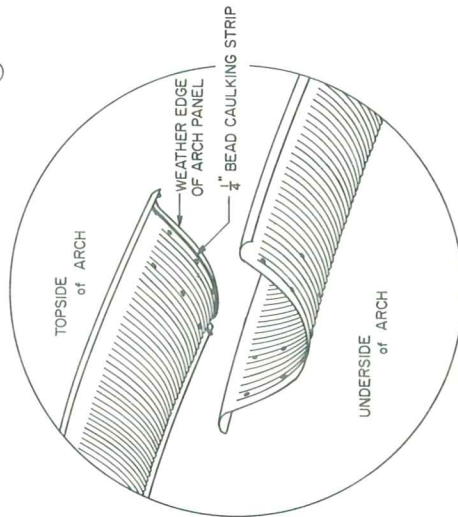
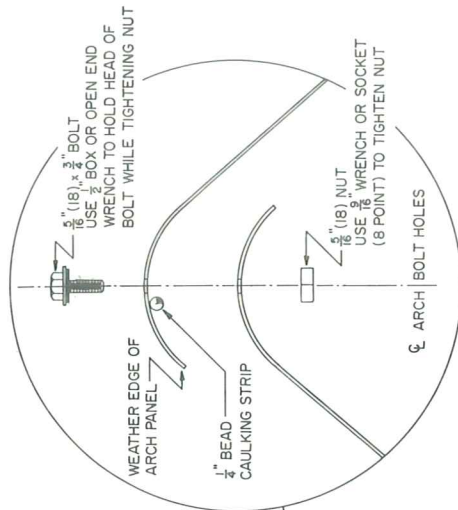
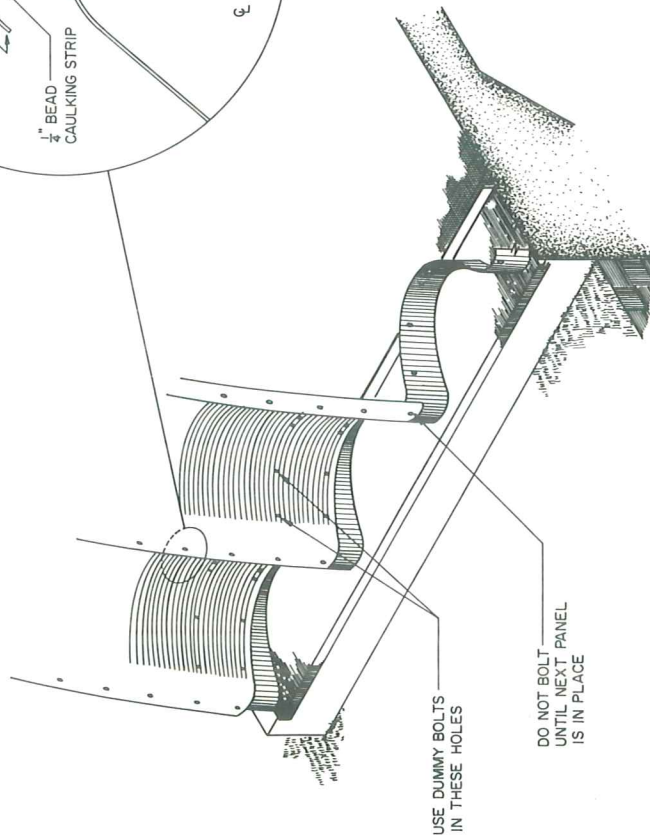




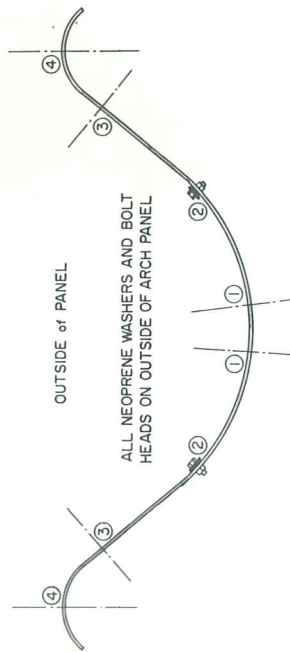
# CAULKING & BOLTING PROCEDURE

## CAULKING NOTES

- 1 USE A  $\frac{1}{4}$ " BEAD AT ALL SEAMS.
- 2 ALWAYS APPLY CAULKING TO UNDERSIDE OF SHEET BEING PLACED INTO POSITION.
- 3 CAULKING SHOULD BE PLACED ON A LINE BETWEEN BOLT HOLES AND WEATHER EDGE OF SHEET. ALWAYS APPLY CAULKING TO CLEAN DRY SURFACE.



DETAIL SHOWING LOCATION OF VALLEY CAULKING STRIP

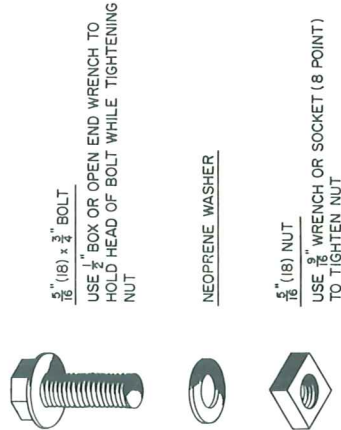


CROSS SECTION OF ARCH PANEL

DO NOT TURN HEAD OF BOLT WHEN TIGHTENING NUTS. TIGHTEN BY TURNING NUT ONLY. NEOPRENE WASHER WILL COMPRESS AND COMPLETELY SEAL BOLT HOLE IF BOLT IS TIGHTENED CORRECTLY. REPLACE ALL WASHERS TORN OR IMPROPERLY SEATED BY INCORRECT BOLT TIGHTENING.

IN ORDER TO ASSURE TIGHT JOINTS, PROCEED AS FOLLOWS:

- 1 PLACE DRIFT PINS IN HOLES #2 & 4, ALIGN HOLES, INSERT BOLTS IN HOLES AND TIGHTEN NUTS.
- 2 REMOVE DRIFT PINS FROM HOLES #2, PLACE IN HOLES #3, INSERT BOLTS IN HOLES #2 AND TIGHTEN NUTS.
- 3 REMOVE DRIFT PINS FROM HOLES #3, INSERT BOLTS AND TIGHTEN NUTS.
- 4 REMOVE DRIFT PINS FROM HOLES #4, INSERT BOLTS AND TIGHTEN NUTS.



TITLE			
CAULKING & BOLTING PROCEDURE			
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SCALE	NO SCALE	APPR'D BY	R.A.
DATE	12-29-58	PART NO.	413



# ERECTING FIRST ARCH

BEFORE STARTING ERECTION REVIEW CAULKING AND BOLTING PROCEDURE.

TO ACHIEVE MAXIMUM WEATHER TIGHTNESS THE BUILDING ARCHES, WHENEVER POSSIBLE, SHOULD BE ASSEMBLED INTO THE DIRECTION OF THE PREVAILING WEATHER.

SEE APPROPRIATE INSIDE CLEARANCE DRAWING FOR CORRECT ARCH PANEL NUMBERS.

START ERECTION OF ARCH BOLTING THE CORRECT FULL PANEL TO THE SHORTEST PANEL IN THE ARCH. DO NOT INSERT BOLTS IN HOLES INDICATED IN FIGURE 3E. BE CERTAIN THE FULL PANEL IS LAPPED ON THE OUTSIDE OF THE SHORT PANEL.

RAISE THE PANEL BOLTED TOGETHER INTO PLACE AGAINST THE SCAFFOLDING, AND ATTACH TO THE BASE CONNECTOR AS SHOWN IN FIGURE 3A.

CONTINUE TO ADD ARCH PANELS. SHOWN ON INSIDE CLEARANCE DRAWING UNTIL THE ADDITION OF ONE MORE PANEL WOULD CAUSE THE PARTIALLY ERECTED ARCH TO CROSS THE CENTER LINE. SEE FIGURE 3B. MOVE TO THE OPPOSITE SIDE OF THE ARCH AND BOLT THE FIRST TWO PANELS TOGETHER. BE CERTAIN THE TOP PANEL IS LAPPED OVER THE BOTTOM PANEL.

RAISE THE TWO PANELS INTO POSITION AGAINST THE SCAFFOLDING AND ATTACH TO THE BASE CONNECTOR. SEE FIGURE 3C.

CONTINUE TO ADD ARCH PANELS UNTIL THE FIRST ARCH IS COMPLETE. SEE FIGURE 3D.

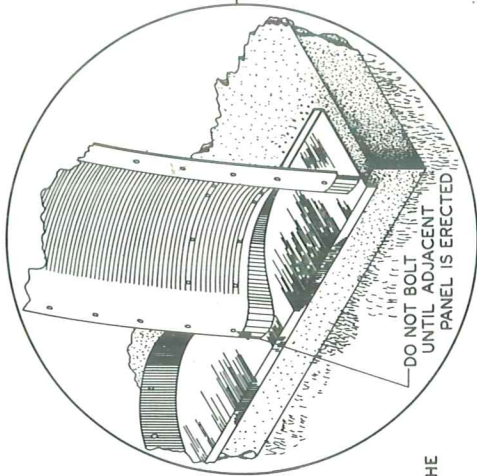


FIGURE 3A

FIGURE 3B

FIGURE 3C

FIGURE 3D

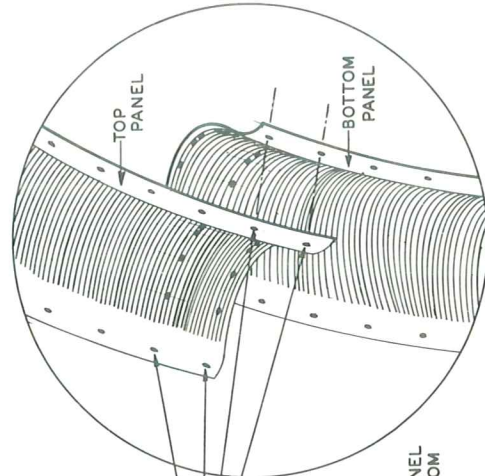


FIGURE 3E

NOTE :  
ALWAYS LAP TOP PANEL ON OUTSIDE OF BOTTOM PANEL.

TITLE			
ERECTING FIRST ARCH			
WONDER TRUSSLESS BUILDING, INC. CHICAGO, ILL.			
DR. BY	R.H.B.	CHK'D BY	D.C.B.
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DATE	12-29-58	PART NO.	DRWG. NO.
			419





# ERECTING ADDITIONAL ARCHES

BEFORE PROCEEDING WITH ADDITIONAL ARCHES, CONSULT APPROPRIATE DRAWINGS FOR LOCATION OF OPENINGS AND SPECIAL ARCH PANELS.

CHECK ARCH RELATIONSHIP DRAWING FOR POSITION OF ARCH PANELS IN THE ADJACENT ARCH.

SET THE FIRST PANEL INTO POSITION ON THE BASE CONNECTOR SO THAT THE ARCH RIB IS LAPPED ON THE OUTSIDE OF THE ADJACENT PANEL. BE SURE THAT THE TOP OF THE PANEL DOES NOT COINCIDE WITH THE HORIZONTAL LAP OF THE PRECEDING ARCH. IF THEY DO, THE WRONG PANEL IS BEING USED. MAKE SURE ARCH RIB HOLES LINE UP AND BOLT THE PANEL TO THE BASE CONNECTOR, EXCEPT FOR THE HOLE INDICATED IN FIGURE 3G.

PLACE THREE DRIFT PINS IN THE THIRD, FOURTH AND FIFTH HOLES FROM THE BASE OF THE PANEL, AS SHOWN IN FIGURE 3G. INSERT A BOLT IN THE SECOND HOLE. REMOVE DRIFT PIN FROM THE THIRD HOLE, PLACE IT IN THE SIXTH HOLE, AND INSERT A BOLT IN THE THIRD HOLE. CONTINUE THIS PATTERN, ALWAYS KEEPING THREE DRIFT PINS IN PLACE AHEAD OF THE BOLTING. UNTIL THE LAST TWO HOLES IN THE PANEL ARE REACHED, DO NOT INSERT THE LAST TWO BOLTS AT THIS TIME.

SET THE NEXT ARCH PANEL ABOVE INTO PLACE. BE SURE IT LAPS THE PANEL BELOW ONE SPACE, AND THAT THE ARCH RIB LAPS ON THE OUTSIDE OF THE ADJACENT PANEL AS SHOWN IN FIGURE 3H. ALIGN ARCH RIB HOLES AND BOLT THE END CONNECTION. DO NOT INSERT THE TWO BOLTS IN HOLES INDICATED IN FIGURE 3H AT THIS TIME.

PLACE THREE DRIFT PINS IN THE FOURTH, FIFTH AND SIXTH HOLES FROM THE BASE OF THE PANEL AND PROCEED AS EXPLAINED FOR THE FIRST PANEL.

CONTINUE TO ADD PANELS TO THE ARCH IN THE PRESCRIBED MANNER UNTIL THE ADDITION OF ONE MORE PANEL WOULD CAUSE THE PARTIALLY ERECTED ARCH TO CROSS THE CENTER-LINE OF THE BUILDING.

MOVE TO THE OPPOSITE SIDE OF THE ARCH AND REPEAT THE SAME PROCESS ADDING PANELS UNTIL THE ARCH IS COMPLETE.

THE REMAINDER OF THE BUILDING IS ASSEMBLED IN THE SAME MANNER, KEEPING IN MIND THE FOLLOWING ITEMS:

- 1 ALWAYS SUPPORT THE ARCHES BEING ERECTED.
- 2 NEVER STAND ON ARCH PANELS BEING BOLTED INTO PLACE.
- 3 CAULK ALL JOINTS.
- 4 STAGGER ALL HORIZONTAL JOINTS - NEVER ALLOW ADJACENT JOINTS TO COINCIDE WITH EACH OTHER.
- 5 NEVER ALLOW THE HEAD OF THE BOLT TO TURN WHEN TIGHTENING NUTS.

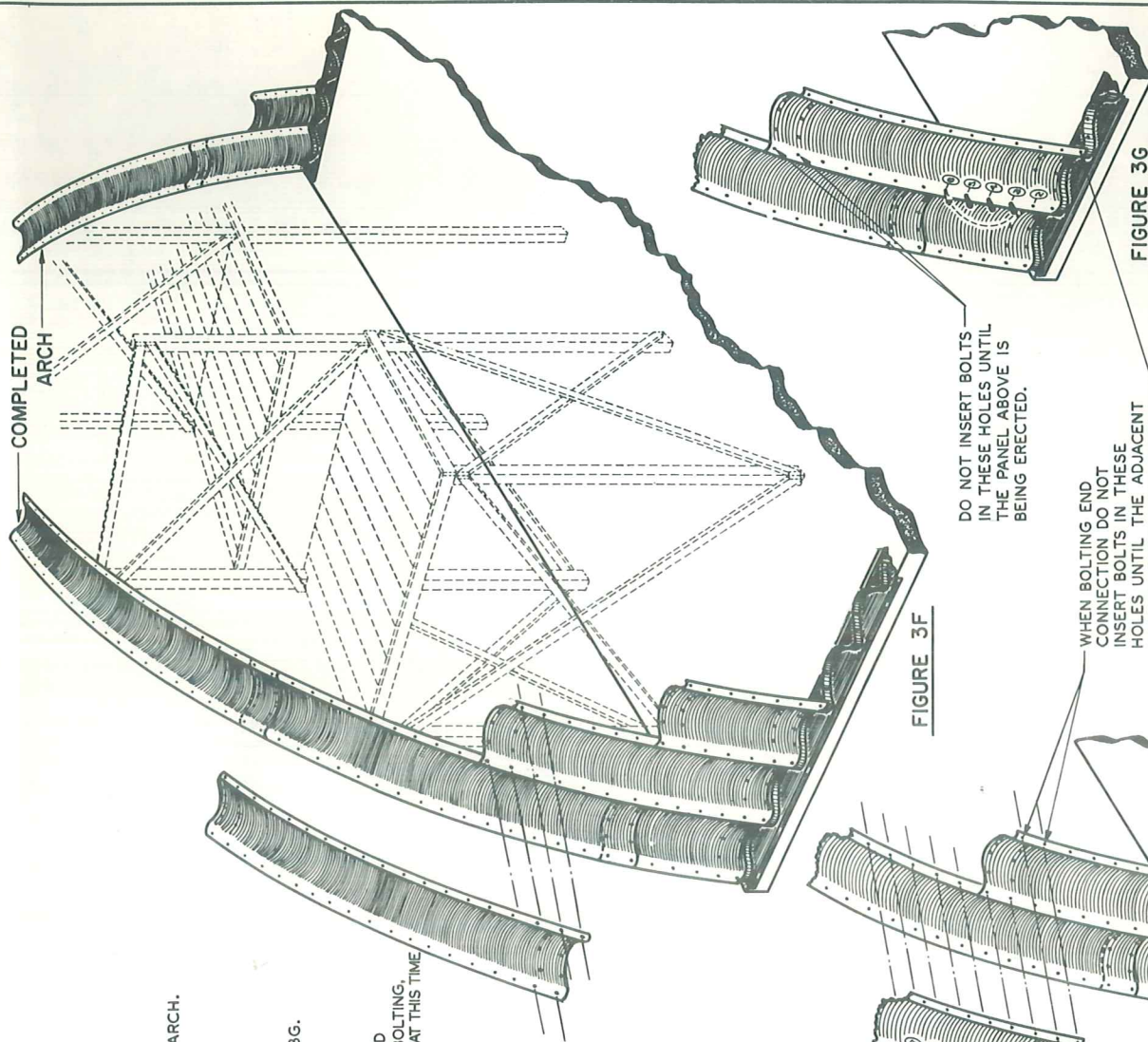


FIGURE 3F

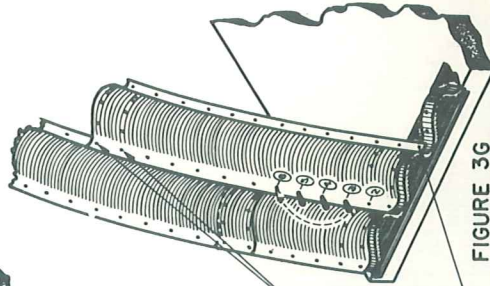


FIGURE 3G

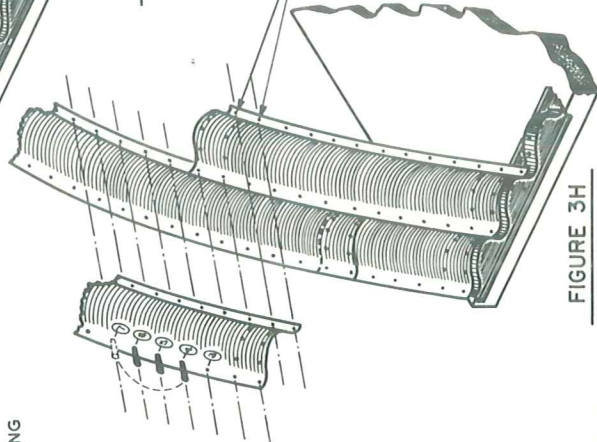


FIGURE 3H

## TITLE

ERECTING ADDITIONAL ARCHES

WONDER TRUSSLESS BUILDING, INC.  
CHICAGO, ILL.

DR. BY J.A.C. CHK'D BY D.C.B.

SCALE NO SCALE APPR'D BY R.A.

DATE 12-29-58 PART NO. DRWG. NO. 417A



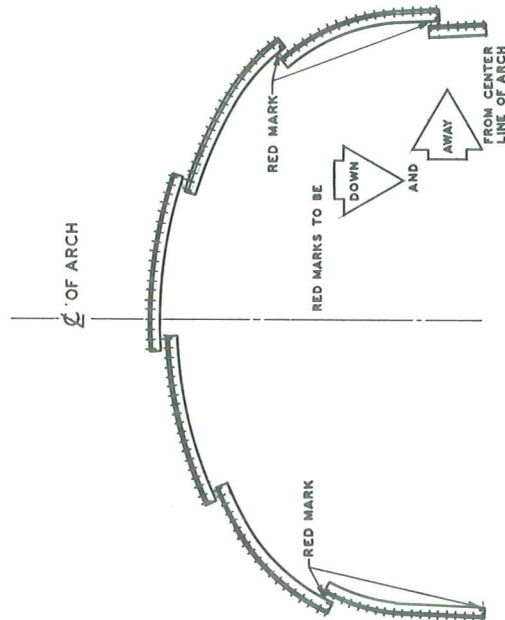


# ERECTING U-TYPE ARCHES

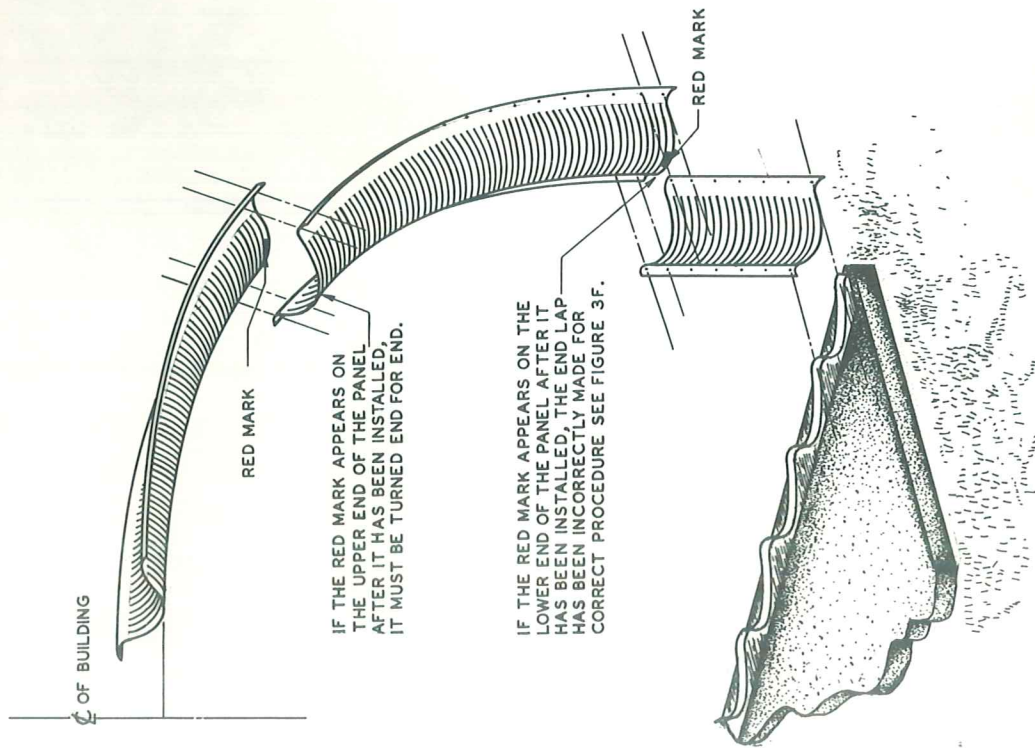
THE PROCEDURE OUTLINED IN THIS MANUAL IS BASIC AND CAN BE APPLIED TO ANY BUILDING REGARDLESS OF SIZE OR SHAPE. HOWEVER, UNLIKE ONE-CENTER ARCHES, PANELS IN U-TYPE ARCHES HAVE POSITION AND DIRECTION. BECAUSE MANY OF THE ARCH PANELS RESEMBLE EACH OTHER AND ALSO BECAUSE OF THE SIMILARITY OF PART NUMBERS THE ENTIRE PART NUMBER MUST BE USED WHEN LOCATING THE POSITION OF ARCH PANELS.

A RED MARK HAS BEEN STAMPED AT THE BOTTOM OF ALL DOUBLE RADIUS ARCH PANELS TO INDICATE THEIR CORRECT DIRECTION. THE END OF THE PANEL WITH THE RED MARK ALWAYS GOES DOWN AND AWAY FROM THE CENTER LINE OF THE BUILDING. WHEN THE ARCH IS CORRECTLY ASSEMBLED ALL OF THE RED MARKS WILL BE COVERED BY THE END LAPS OF THE PANELS. IF AFTER THE PANEL HAS BEEN INSTALLED THE RED MARK STILL APPEARS, IT HAS BEEN INCORRECTLY PLACED AND MAY BE CORRECTED EITHER BY TURNING THE PANEL END FOR END OR BY REVERSING THE END LAP.

CONSULT APPROPRIATE INSIDE CLEARANCE DRAWING FOR CORRECT ARCH PANEL POSITION.



TYPICAL ASSEMBLY OF U-TYPE ARCH



TITLE			
ERECTING U-TYPE ARCHES			
WONDER TRUSSLESS BUILDING, INC. CHICAGO, ILL.			
DR. BY	J.A.C.	CHK'D BY	D.C.B.
SCALE	NO SCALE	APPR'D BY	R.A.
DATE	12-29-58	PART NO.	DRWG. NO.
			420



# ERECTING THE ENDWALL

SEE APPROPRIATE ENDWALL DRAWING FOR PROPER ENDWALL SHEET NOS. AND LOCATION OF OPENINGS.

BEGIN ERECTION OF ENDWALL BY BOLTING THE NARROW FLANGE OF THE JAMB ANGLE TO THE ARCH RIB. START PLACEMENT OF JAMB ANGLE SECTIONS AT THE BASE OF ARCH. CAULK CONTINUOUSLY BETWEEN ARCH RIB AND JAMB ANGLE FLANGE. SEE FIGURE 4A. DO NOT INSERT THE FIRST THREE BOLTS AT BASE OF ARCH.

INSTALL RIGHT HAND UNIVERSAL FILLET PIECE AS SHOWN IN FIGURE 4B. PLACE FIRST ENDWALL RADIUS SHEET INTO POSITION. BE SURE TO PLACE ENDWALL SHEET BEHIND THE JAMB ANGLE AND OVER THE ENDWALL BASE CONNECTOR AS INDICATED IN FIGURE 4. INSTALL LEFT HAND UNIVERSAL FILLET PIECE BEHIND THE FIRST ENDWALL RADIUS SHEET AND OVER THE RIGHT HAND UNIVERSAL FILLET PIECE AS SHOWN IN FIGURE 4B. THUMB TIGHTEN NUTS ONLY UNTIL ENDWALL HAS BEEN COMPLETELY ASSEMBLED.

OPPOSITE CORNER AND INSTALL THE FIRST ENDWALL RADIUS SHEET IN THE SAME MANNER.

CONTINUE TO ADD SHEETS TO THE ENDWALL WORKING IN VERTICAL ROWS AND PROGRESSING TOWARD THE CENTER-LINE OF THE BUILDING ADDING SHEETS TO BOTH THE LEFT AND RIGHT SIDE OF ENDWALL. TRY TO KEEP AREA OF ASSEMBLED ENDWALL APPROXIMATELY EQUAL ON EITHER SIDE OF THE CENTER-LINE. BE SURE TO CAULK ALONG THE JAMB ANGLE AND AT ALL VERTICAL SEAMS. DO NOT CAULK THE HORIZONTAL SEAMS.

CHECK APPROPRIATE ENDWALL DRAWING FOR LOCATION OF SHEETS TO BE DELETED FOR ACCESSORIES AND DOOR OPENINGS.

BEGINNING WITH THE CENTER ROW OF SHEETS, TIGHTEN THE TWO ROWS OF BOLTS ON EITHER SIDE OF THE VEE. FROM TOP TO BOTTOM OF ENDWALL. WORK ONE VEE AT A TIME PROGRESSING TOWARD THE SIDES UNTIL ENDWALL IS COMPLETE.

BE SURE TO TIGHTEN ANCHOR BOLT NUTS LEFT LOOSE FOR ENDWALL ERECTION - SEE FIGURE 2C.

## NOTE:

- TOP SHEETS LAP ON THE OUTSIDE OF SHEETS BELOW.
- ALL ENDWALL VEES FACE INSIDE OF BUILDING.

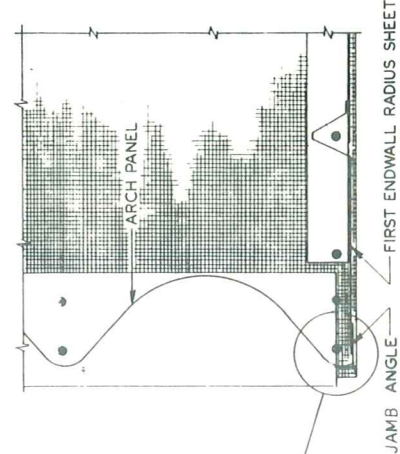
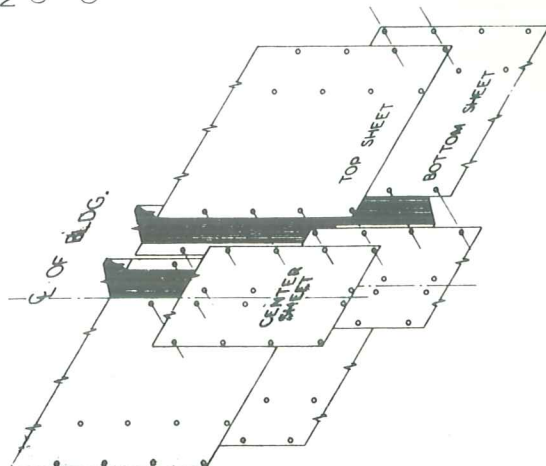
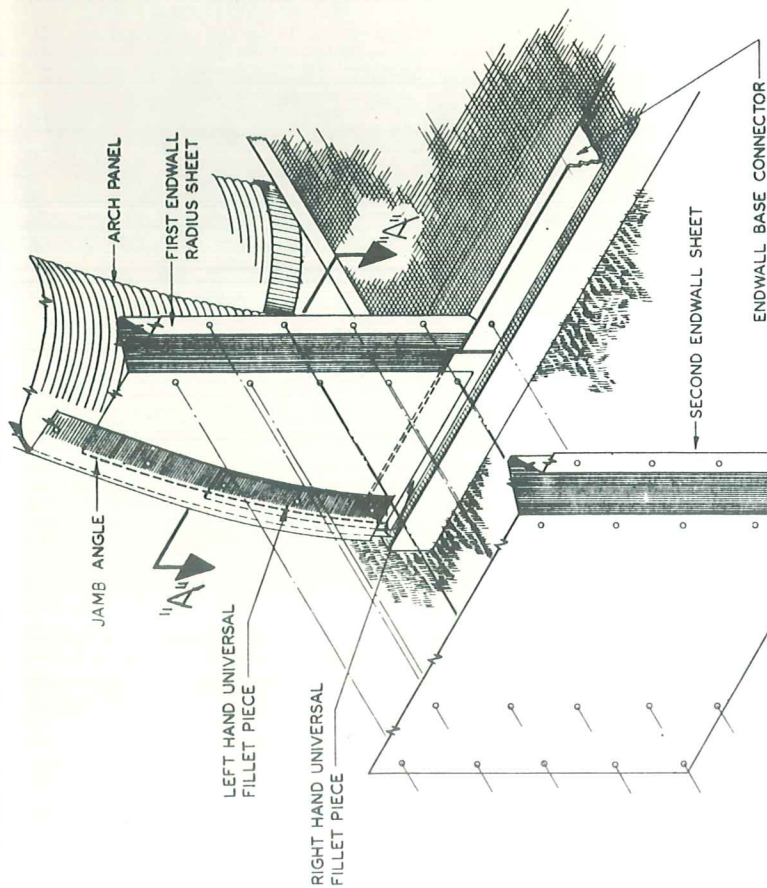
## NOTE:

THE LEFT HAND AND RIGHT HAND UNIVERSAL FILLET PIECES HAVE BEEN OMITTED FROM FIGURE 4A. FOR INSTALLATION DETAILS SEE FIGURE 4B.

FIGURE 4

## IMPORTANT:

THUMB TIGHTEN NUTS ONLY, UNTIL ENDWALL HAS BEEN COMPLETELY ASSEMBLED. THEN BEGINNING WITH THE CENTER ROW OF SHEETS, TIGHTEN THE TWO ROWS OF BOLTS ON EITHER SIDE OF THE VEE. FROM TOP TO BOTTOM OF ENDWALL. WORK ONE VEE AT A TIME PROGRESSING TOWARD THE SIDES UNTIL ENDWALL IS COMPLETE. BE SURE TO TIGHTEN ANCHOR BOLT NUTS LEFT LOOSE FOR ENDWALL ERECTION - SEE FIGURE 2C.



SECTION "A" - "A"

FIGURE 4A

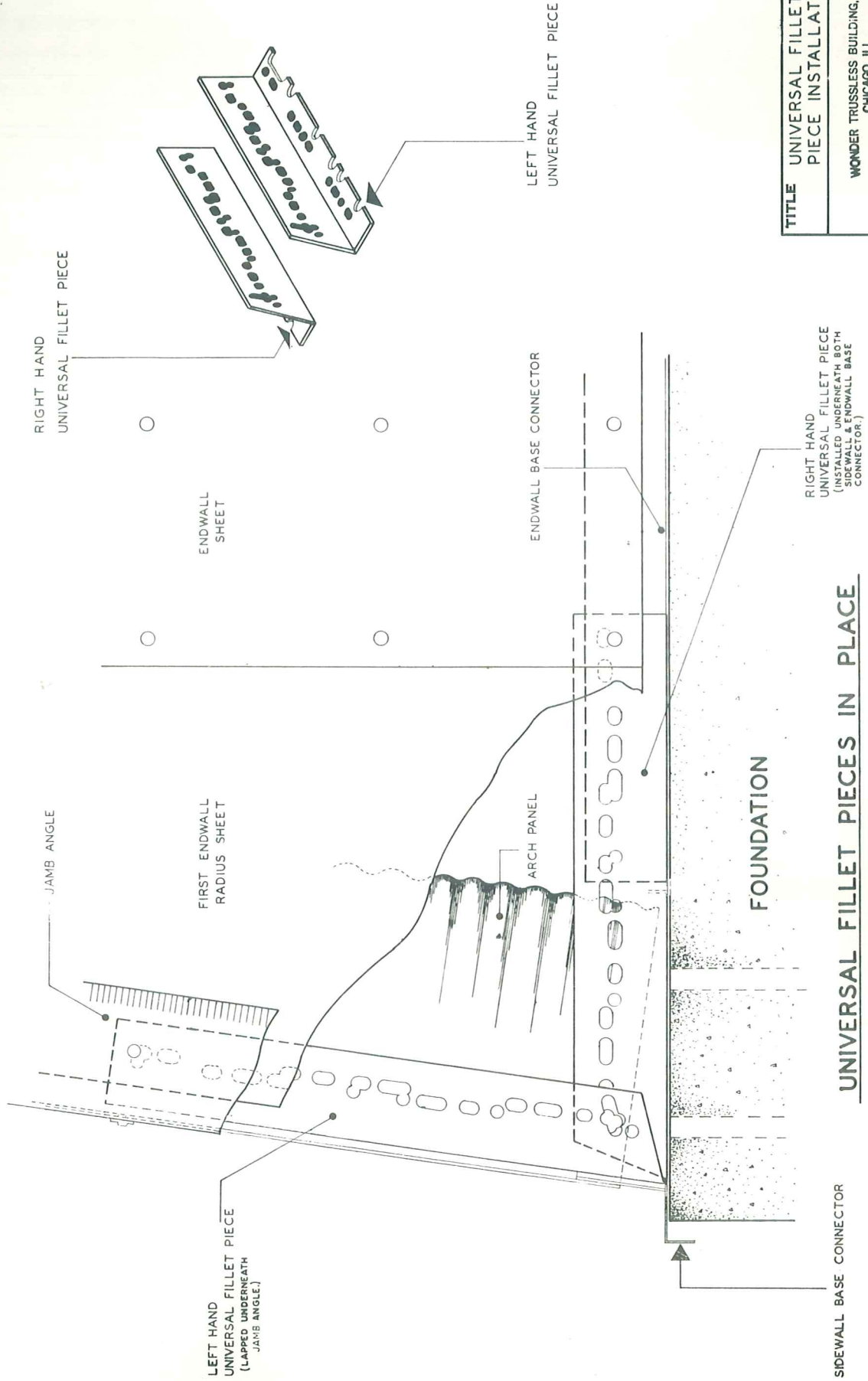
TITLE			
ERECTING ENDWALL			
WONDER TRUSSLESS BUILDING, INC. CHICAGO, ILL			
DR. BY	J.A.C.	CHK'D BY	D.C.B.
SCALE	NO SCALE	APPR'D BY	R.A.
DATE	12-29-58	PART NO.	DRWG. NO.
			413A

REV. J - JAMB ANGLE 4-5-66 SN





# RIGHT HAND CORNER OF BUILDING



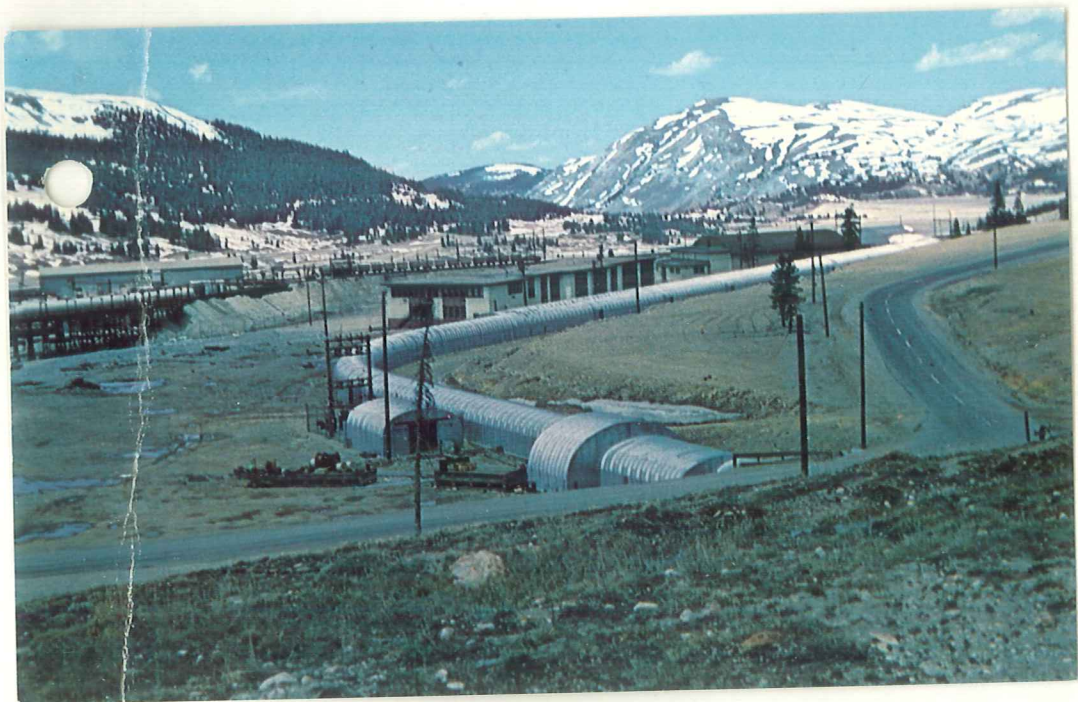
## UNIVERSAL FILLET PIECES IN PLACE

FIG. 4B

TITLE		UNIVERSAL FILLET PIECE INSTALLATION	
DR. BY		WONDER TRUSSLESS BUILDING, INC. CHICAGO, ILL	
DR. BY	R.H.B.	CHK'D BY	D.C.B.
SCALE	NO SCALE	APPR'D BY	R.A.
DATE	12-29-58	PART NO.	DRWG. NO.
			-412A







#### LIGHT MANUFACTURING PLANT

50 foot straight side unit used for manufacturing of fishing lures in Winter Park, Florida.



WONDER Trussless BUILDING, Inc.  
Chicago 60650

PLACE  
STAMP  
HERE

## POST CARD

Address

Robinsons Inc., Orlando, Fla.



79032

#### SNOW COVER

High in the Colorado Rockies the problem of keeping heavy snows from clogging rail trackage is overcome with various Wonder Arches.



WONDER Trussless BUILDING, Inc.  
Chicago 60608

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Kodachrome by Cliff Oliver

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